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BKK LANDFILL IN WEST COVINA, CALIFORNIA

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY, ENVIRONMENT, AND SAFETY ISSUES AFFECTING SMALL BUSINESS

OF THE

COMMITTEE ON SMALL BUSINESS
HOUSE OF REPRESENTATIVES

NINETY-EIGHTH CONGRESS

SECOND SESSION

WASHINGTON, DC, JULY 31, 1984

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BKK LANDFILL IN WEST COVINA, CALIFORNIA

TUESDAY, JULY 31, 1984

House of Representatives,
Subcommittee on Energy, Environment and
Safety Issues Affecting Small Business,
Committee on Small Business,
Washington, DC.

The subcommittee met, pursuant to notice, at 2 p.m., in room 2359-A, Rayburn House Office Building, Hon. Charles W. Stenholm (chairman of the subcommittee) presiding.

OPENING STATEMENT OF CHAIRMAN STENHOLM

Mr. Stenholm. The hour has arrived and I believe all of the parties are now present. We will convene this hearing.

I would like to take this opportunity to thank all of those present for appearing and participating in this hearing on such short notice. We have called this hearing due to the most recent in a series of critical developments at the BKK landfill in West Covina, CA.

Due to the gravity of the situation in West Covina, their able representative, and my esteemed colleague, Representative Esteban Torres, has called for this emergency hearing.

On June 3, 1983, this subcommittee conducted a field hearing in West Covina. The subcommittee received testimony from homeowners, businessmen, and others whose lives are impacted one way or another by developments at the BKK facility.

Today's hearing is a followup to this subcommittee's 1983 hearing and I am sorry to report that the situation in West Covina has worsened. In a letter to Representative Torres dated April 2, 1984, EPA's Region IX Administrator, Ms. Judith Ayres, stated, and I quote: "To date, EPA has received no evidence to indicate that the continued operation of the BKK landfill poses a danger to nearby residents or businesses."

In a letter from the California Department of Health, it was stated, "Present information available does not indicate any increased public health risk to nearby residents." It is now my understanding that the recent discovery of methane and vinyl chloride gases in and around the homes in West Covina was discovered by accident by the California Gas Co. Given the fact that 21 families have had to evacuate their homes, I would have to state my grave reservations about how effective EPA has been in monitoring this situation.

We have with us today four officials from EPA. I understand Lee Thomas, Assistant Administrator for Solid Waste and Emergency

Response here in Washington, will make an introductory statement. He will then call on Harry Seraydarian, Director of Toxics and Waste Management Division, EPA's Region IX Office, to make a statement.

The gentleman to my right is Dr. Michael M. Simpson, from the Library of Congress, Science Policy Research Division.

The subcommittee looks forward to having a summary of events to date and would like to know what EPA intends to do to alleviate the deteriorating situation in West Covina, CA.

Before I recognize my colleague to the right for his opening remarks and then you, Mr. Thomas, I would like to acknowledge a letter that I received from representatives of BKK; their letter and other statements will be added to the record. If there is no objection, it shall be done.

[The letter from BKK Corp. follows:]

BKK CORPORATION

2550 237TH STREET • P.O. BOX 3038 • TORRANCE, CALIFORNIA 90510
(213) 539-7150

July 28, 1984

The Honorable Charles W. Stenholm
Chairman
Subcommittee on Export Opportunities and
Special Small Business Problems
House Committee on Small Business
Washington, D.C. 20515

Dear Mr. Chairman:

We understand that the Subcommittee has scheduled a hearing on July 31, 1984 to review EPA and other regulatory enforcement at the Class I landfill operated by this company in West Covina, California. We welcome the Subcommittee's interest and will be pleased to provide any testimony or other information that you may require in your deliberations.

Unfortunately, we cannot be present at the July 31 hearing. On July 23, 1984, the City of West Covina sought a closure order from the Los Angeles Superior Court citing a recent incident of methane gas migration from the landfill into several homes located on the southern border of the landfill. The court denied the order after finding that closure would be of no immediate benefit in correcting the migration problem. The court has scheduled another hearing on July 31, 1984, at 10:00 A.M. to evaluate the progress of the remedial measures that have been taken by this company under the direction of EPA and the responsible state and local regulatory agencies. We will forward the entire court record to the Subcommittee.

Although we are unable to be present for the hearing, we would like to briefly comment on some of the major issues. With the permission of the Subcommittee we would also appreciate the opportunity to supplement our comments with a more thorough description of the many other issues that are involved.

We believe the following major issues should be addressed by the Subcommittee for a full understanding of the impacts on small businesses, public health and safety, and the operational security of the site.

1. Although state health officials evacuated homes as a precaution against landfill gas exposure, the level of detection of gas in most cases has been so low (parts per billion) that the short and long term health risks, if any, cannot be readily ascertained. The issue is a familiar one: What is safe? How clean is clean? Is it reasonable to equate long term health risks with short term exposures? How do we evaluate low level exposures in a complex industrial society that subjects all of us to numerous hazardous substances on a daily basis? (See enclosed ambient air monitoring study conducted by the State of California.)

2. The BKK landfill has been the most intensely scrutinized and regulated facility in California. During the past year there has been a minimum of three government inspectors on-site each day. The site is subject to the jurisdiction and active regulation of the following government agencies: the Environmental Protection Agency, the California Department of Health Services, the Los Angeles Regional Water Quality Control Board, the South Coast Air Quality Management District, the Los Angeles County Department of Health, and the City of West Covina. During the past year the company has spent over $2 million just responding to regulatory demands for geological information, landfill gas constituents, groundwater levels, and ambient air data. The issue is a fundamental one: Does the current regulatory system work? Can it be made to work? Is the answer to ship wastes to the desert in part on the presumption that if the regulatory system doesn't work it won't matter? Are government regulators suited to manage closed sites?

3. The facility is the only Class I landfill authorized to dispose of hazardous wastes in Southern California. It also represents fifty (50) percent of the remaining capacity in Los Angeles County for municipal refuse. It is by almost all accounts a valuable and necessary community resource. The landfill was there before the construction of the residences. Is the company willing to make whatever investments are necessary to assure the security of the site? The answer is clearly yes. Our record speaks for itself. However, the real issue is whether the people of the region who depend on the service we provide want to continue to have that service performed. There are alternatives. They are

more costly, more distant, and not necessarily more environmentally sound. They are just in another place. We believe that except for residents immediately adjacent to the landfill, the public and affected businesses favor the continued operation of the facility.

4. The question of closure should be discussed. It is a serious matter, however, and must be approached carefully and deliberately. Particularly in the context of the recent gas migration problem where it is clear that closure will accomplish nothing. Landfill gas migration is a common occurrence at all landfills. Most municipal landfills are located within close proximity to residential areas. There is a good record of control at this landfill and many other well managed sites.

The Subcommittee on Energy, Environment, and Safety Issues Affecting Small Business held a hearing in West Covina, California on June 3, 1983 to hear testimony on these and the many other issues involved. We recommend that the record of that hearing be considered in conjunction with the Subcommittee's present inquiry. The Energy Subcommittee especially focused on waste transportation issues. We are pleased to report that in the time since the earlier hearing, through the efforts of this company, waste haulers, the City of West Covina, and the California Highway Patrol, the incidence of spills has been drastically reduced. There is also a wealth of new information on the geology of the site that we believe demonstrates the commitment of this company and the regulatory agencies to provide a solid scientific basis for making judgements on the future use of the site.

We have not been content to simply study the situation since the last hearing. In the interim, the company has designed and contracted to greatly expand the gas collection system and construct an energy plant that will convert the incinerated gas into electricity. The company is presently designing a wastewater treatment plant and leachate collection system with the objective of removing and treating all excess liquids that may exist in the landfill now and in the future. A new groundwater monitoring system is in place and will be expanded over the next several months.

The safe management of hazardous wastes in our society is as much a socio/political challenge as a technical one. It is consequently a complex of many interests and needs [illegible] been simple and straightforward. Our policy is full and open disclosure of our problems as well as our accomplishments. We will comply with all regulatory requirements, and whenever possible seek to introduce improved technologies. We well appreciate our responsibility to the public at large and to our resident neighbors, and intend to commit whatever resources are required to fulfill that responsibility.

Very truly yours,

Ben K. Kazarian Jr.

Ben K. Kazarian, Jr.
President

BKK:prc

encl

cc: The Honorable William D. Ruckelshaus
Committee Member Ireland
Committee Member Wyden
Committee Member Savage
Committee Member Sisisky
Committee Member Torres
Committee Member Vandergriff
Committee Member Broomfield
Committee Member Roth
Committee Member Chappie
Committee Member Bilirakis
Senator Alan Cranston
Senator Pete Wilson

Mr. **Stenholm**. Now I would recognize Mr. Torres.

OPENING STATEMENT OF HON. ESTEBAN EDWARD TORRES, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. **Torres**. Thank you, Mr. Chairman. I am grateful for your willingness to hold this hearing. As you just stated, this subcommittee held a factfinding hearing in June 1983 on the operations of the BKK landfill. We received testimony from EPA, from California health officials, the mayor of West Covina, as well as area residents and small business owners. Today we are here because of a critical and unfortunate situation relating to the operations of the BKK landfill. In the last 15 days, nearly 100 residents, my constituents, living near the BKK landfill, have been evacuated from their homes.

These evacuations were prompted because high concentrations of methane gas and cancer-causing vinyl chloride were found in their homes and backyards. Within hours after these gases were discovered, health officials determined that the gases were being released from the BKK landfill. In an effort to correct the problem, 4 days later EPA issued an order instructing the BKK to install a gas-collection system. Although BKK complied, this gas-collection system failed.

On July 25, I was informed that two additional families living more than half a mile from the evacuated area were ordered to leave their homes. Mr. Chairman, only a few of these nearly 100 evacuated residents have been able to return to their homes.

Because of your decision to hold this hearing, we have the opportunity to learn the truth about the BKK landfill. We have the opportunity to obtain from EPA a summary of the critical events at the BKK landfill since July 17, and we have the opportunity to learn what measures EPA has taken to correct this dangerous situation at the landfill.

Mr. Chairman, I am worried that these recent events in the area surrounding the BKK landfill will simply scare the small business owners working in the community and that they will close their doors and move to a safer area. I worry that real estate values will decline because people will not want to live near a dangerous hazardous waste landfill and this has serious implications for that industry and the people that invest and develop and construct homes there.

I worry that the families living in this area will flee their homes because they fear that their health and well-being are threatened. Mr. Chairman, we have an opportunity to review this critical problem in my district and we have an opportunity to ensure that EPA is protecting the health of my constituents and the environment of West Covina and its environs.

I appreciate EPA's willingness to participate in this important hearing and, once again, I would like to thank you, Mr. Chairman, and the other members of the committee for holding these hearings in such short notice.

Mr. **Stenholm**. Mr. Thomas, we will be more than happy to hear from you.

TESTIMONY OF LEE THOMAS, ASSISTANT ADMINISTRATOR FOR SOLID WASTE AND EMERGENCY RESPONSE, ENVIRONMENTAL PROTECTION AGENCY

Mr. THOMAS. Thank you, Mr. Chairman.

I don't have prepared remarks, but what I would like to do is introduce my colleagues with me and also make some general introductory remarks, and as you indicated, ask Harry Seraydarian to give a complete review of the facility and the chronology of events, as well as the current status of the facility.

I am Lee Thomas. I am the Assistant Administrator for Solid Waste and Emergency Response at EPA and as such am the national program manager for the Superfund Program and for the RCRA Program, which is the Hazardous Waste Regulatory Program. Both programs have a relationship to this facility, but specifically the RCRA Program has the direct relationship and is the one that we will dwell on today.

On my left is Gene Lucero, who is Director of my Office of Waste Programs Enforcement in Washington, with enforcement responsibilities as far as policy is concerned for the RCRA Program. On my far right is Harry Seraydarian, who is Director of the Toxics and Waste Management Division in our region IX office in San Francisco that has direct responsibility for this facility in the context of the California State program. Next to me on my immediate right is John Wise, who is the Deputy Region Administrator from region IX in San Francisco.

The four of us will attempt to review the situation at BKK, respond to any specific questions you have and, hopefully, provide you with as much information as we have at our disposal and bring you completely up to date on the situation at BKK.

I would like to indicate a couple of things. First, we take the situation that has developed at the BKK facility very seriously. It is a matter that we have been aware of, have been working with the State of California for some time and I think when we review the actions that we have taken, you will recognize that we have been very actively involved, particularly in the immediate situation.

The other point I would like to leave with you is the fact that the RCRA Program is a Federal/State program. Congress' intent in the RCRA Program was that management of that program would be delegated to the States as the States were able to assume responsibility, with EPA retaining oversight, as well as direct intervention capability when a State didn't carry out their responsibilities. We do that in a phased fashion under RCRA.

The first phase of delegation is the inspection and enforcement phase of the program. California has been delegated that phase of the program for quite some time and has carried it out over the last years. BKK, for instance, is a facility that would fall under that portion of our program, so as far as State inspection, it would appropriate under the RCRA delegations that they have, as well as followup enforcement actions. In our oversight role, EPA's oversight role of the State's ability to carry it out and how well they have carried it out, we exercise an independent inspection program. As you can see from a review of this chronology, you will see where we have exercised that independent role. We have inspected and we have exercised our role for issuance of enforcement orders, EPA enforcement orders, in conjunction with State enforcement orders.

So clearly, it is a Federal/State interactive role with the State on the front lead edge of implementation of the program in that it has been delegated to them.

Additionally, this site, as you will hear and as you probably know, presents not only environmental issues as far as RCRA is concerned, but other media issues as well. That is, air and water issues. So not only the RCRA authorities that we have, but also the air and water authorities that we have come into play. Both of those programs are also delegated programs to the State of California and there are additional responsibilities and authorities in the State, their organizational authorities, for the water programs and the air programs.

So you will hear, as we talk through how varying organizational components of California State government are taking action or have jurisdiction in this regard, in addition to those of our region IX office.

Now, as far as enforcement action is concerned, when we are looking at a facility like this, you would think that—first line, you will see State actions; second line, you will see regional actions, or EPA actions.

Our regional administrators have full delegated authorities in this regard from the Administrator. My responsibility is to set overall policy, monitor operations, provide management assistance and technical guidance, and also on an enforcement action under RCRA, to concur in certain enforcement action. So I am involved as far as actual enforcement actions in a concurring role, but as far as EPA is concerned, primary responsibility rests with our regional administrator and for that purpose, you will see the majority of the discussion is led, as far as the specific facility is concerned, by our regional personnel.

So with that, let me turn to John Wise for a few comments and also an introduction of Harry Seraydarian from our regional official to get into the specifics of BKK.

Mr. STENHOLM. Mr. Wise, before you proceed, I would recognize our colleague from a neighboring district in California, Mr. David Dreier. Mr. Dreier will make a few opening comments, and then we will proceed.

TESTIMONY OF HON. DAVID DREIER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. DREIER. Thank you very much, Mr. Chairman.

I am a member of the full committee, but am not a member of this subcommittee, and greatly appreciate the opportunity to be here today to face what certainly is a very critically important issue to all of us. I appreciate the members of this subcommittee, on such short notice, focusing attention on this issue, in light of a number of developments which have taken place.

As you well know, problems at BKK have been a long time in coming and despite a number of remedial improvements and ongoing repair efforts, evidence is mounting that the public health is seriously threatened by toxic dumping and will continue to be threatened as long as that dumping continues.

Since the fall of 1980, I have maintained that toxic dumping at BKK is a clear potential threat to the public. Without question, in the intervening 4 years, the situation at BKK is advancing from a potential threat to an actual one and I very much hope that the EPA will act swiftly on the request that my colleague, Mr. Torres, and I put together, along with a number of our colleagues from southern California, calling on the Agency to ban any further dumping of toxic substances at BKK.

Further, I would like to make a brief note about alternatives to BKK because anyone in this Congress and in the area that I represent knows that I take a very strong probusiness position and would not want my opposition to dumping at BKK to be in any way interpreted as an antibusiness tact. We simply cannot allow toxic disposal in residential areas to continue to be dumped and we have got to immediately begin identifying alternative sites.

During my first term in the 97th Congress when I served on the Government Operations Committee and had BKK as part of the district which I had represented, I made inquiries with the Department of the Interior and the General Services Administration about the availability of Federal lands in southern California where toxic wastes could be disposed without proximity to the public or any threat to public health and safety.

In light of the recent developments at BKK and congressional resolve that BKK should be closed, I believe it is high time to renew our efforts to find a safe location, possibly within the vast Federal land holdings where we can transfer toxic dumping activities.

I look forward to working with members of this subcommittee toward that goal, and again, very much appreciate the opportunity to be here and anxiously look forward to the day when we will no longer have toxic substances rolling up and down Azusa Avenue in the San Gabriel Valley.

Mr. **Stenholm**. Mr. Wise.

TESTIMONY OF JOHN WISE, DEPUTY ADMINISTRATOR, REGION IX, ENVIRONMENTAL PROTECTION AGENCY

Mr. **Wise**. My name is John Wise. I am the deputy regional administrator with the Environmental Protection Agency in our San Francisco office. I have just a couple of brief comments to make, particularly directed to Congressman Torres.

Judith Ayres, the regional administrator in San Francisco, is unable to attend. She is meeting today with the senior California officials of the Department of Health Services on this matter and she regrets very much she could not be in attendance and conveys her apologies.

Mrs. Ayres has been in close, almost daily, communication with you, your district office, as events have unfolded, and we hope that communication has been productive in keeping your staff involved and advised.

We certainly want to do everything we can to make sure that you understand current events as they stand and the actions we are taking. Also, Mrs. Ayres has been to West Covina, has viewed the BKK landfill and is certainly very, very sensitive to the location of that facility in the middle of the community of West Covina, the potential dangers that an operation of that type may pose to a community and the business interests it represents.

She wants me to assure this committee and Mr. Torres, in particular, that we, in fact, are doing everything in our power to ensure that the public health of the citizens of West Covina are ensured, protected to the best of our ability.

I would like at this time to introduce Mr. Harry Seraydarian. Harry is the director of our Toxics and Waste Management Division in region IX, San Francisco. I will ask Harry to give this subcommittee a brief overview of the site and chronology of events that have led us up to this point.

I introduce Harry Seraydarian.

TESTIMONY OF HARRY SERAYDARIAN, DIRECTOR OF TOXICS AND WASTE MANAGEMENT DIVISION, REGION IX, ENVIRONMENTAL PROTECTION AGENCY

Mr. **Seraydarian**. Thank you.

For those of you are aren't familiar with the site, I would just like to briefly describe it.

[Photograph.]

Mr. **Seraydarian**. It is adjacent to the community of West Covina. It is one of the larger sites in southern California. It is the only one in the metropolitan area.

It was at one time one of the largest sites in the country, but the amount of waste that is presently going to the site has been significantly reduced and I will describe that chronology.

Mr. **Stenholm**. What is the scale of that photograph?

Mr. **Seraydarian**. This is about 500 or 600 acres, so I would say that this is about a half mile across.

Basically this site takes solid waste and hazardous waste. At one time, it only took solid waste down in this lower area. In the late 1970's, it started to take hazardous waste and the process that it established, which is used in other parts of the country but not to this degree, is to take hazardous waste, mix it with solid waste in cells in certain areas, and then cover it over, the theory being that the solid waste absorbs the hazardous waste and actually retains the liquid.

If you look at the area, you can see that the residential areas are very close. Now, I will come back to this to explain what we have done with the recent events, but what I would like to do is go through the last year. I testified at the hearing that was held in West Covina on June 3, 1983. At that time, I explained EPA's oversight role and I indicated that in the near future, we intended to do an overview inspection at BKK, as we were doing for all the major facilities in California.

We did that overview inspection over a 2-day period on June 8 and 9. We invited the Department of Health Services and other agencies along. They did participate. On August 1, not long thereafter, we received BKK's permit submittal for their final permit. We had requested it early that year.

Based on the inspection report and a part B submittal, we reached some conclusions about problems at the site. They are basically in four areas: BKK had claimed a ground-water monitoring waiver, and I can explain that in some detail later; they were handling bulk liquids in a fashion that we considered unacceptable; we had difficulties with their approach to waste analysis; and we also had concerns over the way they were handling ignitable and reactive waste. These were stringent reviews of our regulations.

Mr. Torres, if you remember at that hearing, you were given assurances by all the State agencies that everything was under control and there were no violations.

At that time, they were not completely familiar with all our regulations. It has taken some time for them to completely appreciate the extent of our regulations.

Mr. **Torres**. With one correction, if I may state, there was an incomplete report as to the hydrogeological survey of the area, which we still don't have.

Mr. **Seraydarian**. Right. OK.

According to the statute, EPA has to give an authorized State notice before we take any action. We had worked out in early 1981 an agreement with the State consistent with the Resource Conservation and Recovery Act that we would give them formal notice when we found violations before we take any action.

On August 25, we gave that formal notice, based on the inspection report and a cursory review of the permit submittal. On October 21, we sent a warning letter directly to BKK on the permit. We still have direct responsibility for issuing the final permit. We anticipate that California will take over that responsibility, in addition to others, by January 1985.

On December 20, after additional work had been done by BKK at the site based on the problems we had identified, the State and BKK signed an agreement for further site investigation, including the ground-water hydrogeology and other site-assessment activities.

We reviewed that. Even though we had been involved all along, we were still concerned that the State's activity did not ban bulk liquid disposal as of a certain date, unless they could demonstrate that their facility could contain that bulk liquid through an impermeable barrier and a leachate collection system.

So we issued an order on December 29. We basically paralleled this agreement, but we added in the items that we thought were essential to an enforceable agreement.

On February 3, BKK responded to the court through the administrative law judge, which is part of EPA's process under administrative orders, and requested a judgment. They basically questioned our authority to take action in an authorized State.

On April 18, after reviewing all that information, the administrative law judge agreed with BKK that the State's action was substantially equivalent to EPA's action and he didn't quite appreciate the differences in our enforcement action. Luckily enough, the State, after we issued our order, amended a document that they used to allow the facility to operate, called an interim status document. They can amend this document arbitrarily at any time, based on the State's statute.

They incorporated the same elements in our order, so even though the judge nullified our enforcement action, the State had adopted the equivalent requirement.

Through March and April, BKK was involved in additional site assessments. At one point in time in late April, they observed that there were some permeable strata in one part of the area, and going back to this chart, they discovered that there was a permeable strip across here——

[Photograph.]

Mr. SERAYDARIAN. Where it was indicated that leachate could move possibly in this direction. Based on that, the State agencies established an interagency committee to review all of this data. That included not only the Department of Health Services, but the regional water quality control board, the air quality management district, the county health office, the city of West Covina and the EPA. On April 20, the State issued a notice that they wanted to restrict the actual disposal to the lower portion of the site to avoid that permeable strata.

On April 27, based on the additional identified problems, EPA, in spite of the fact that the judge had questioned our authority, took the next step under the Resource Conservation and Recovery Act, used additional authority that Congress had added in 1981 and issued an order under section 3013, which allows us to order a facility to do additional remedial investigation. This was intended to expand and expedite the site investigation that had begun in early April.

On May 29, BKK submitted a plan in response to this order. I should mention that the State took parallel action to match ours. This plan was reviewed by all the agencies.

[Photograph.]

Mr. SERAYDARIAN. On July 3, EPA sent our preliminary review to BKK, provided additional comments to the interstate agency review and those comments were sent to BKK on July 12, and they were given 30 days to revise that proposal, but there is still ongoing work. I will describe the status of that in a moment.

But I wanted to bring you up to date on the EPA enforcement actions and the State role at the site through the last year. As Congressman Torres pointed out, there has been a lot of activity at the site and, as we discover more about the site, we anticipate we are going to conclude that there are additional problems that are going to have to be mitigated.

Now, the recent events: On July 17, explosive levels of methane gas were detected around four homes, and I would like to point out where they were.

[Photograph.]

Mr. SERAYDARIAN. The four homes were in the southern area on the streets immediately adjacent to the site. Four homes, very close to the site, were found to have explosive levels of methane and some levels of vinyl chloride. Based on that, the city decided to evacuate that area. The reason they evacuated 19 homes was to err on the side of caution. They evacuated all of the adjacent houses and the houses in between the ones that had been identified to have a problem.

On July 20, the city issued an order to BKK and they said that unless they could demonstrate that what they were immediately going to do to correct this gas migration problem could correct the problem, BKK should be closed to refuse disposal in 24 hours. The term "refuse" is a broad term. It could be interpreted to mean solid waste and hazardous waste.

On July 21, as was mentioned, EPA issued an order under Superfund which required abatement. Under 106, we can order a facility to deal with a release. Since we did have a documented release that we concluded did present an imminent substantial endangerment at the time, we ordered BKK to put in wells to deal with the gas migration so that it wouldn't leave the site and also, to pay for relocation and to reimburse the city for any of their expenses.

I will get back to some additional activities that EPA was involved in during the course of this time.

On July 23, immediately thereafter on Monday, BKK took the city's action to court and a superior court judge upheld BKK's right to accept solid and hazardous waste. The decision was based on the presentation of information by BKK that the present activities did not cause the gas-migration problem. It was the past disposal, and I will try to explain that with a rather simplified chart in a few minutes.

He also postponed any additional action until July 31. That hearing is being held right now and the city and BKK are presenting information on what has been done to deal with the gas-migration problem.

We were notified on July 17. We immediately mobilized our emergency response team and one of our on-scene coordinators under the Superfund program was sent down to the site. We also called in the Pacific strike team, which includes the Coast Guard. They brought their emergency vehicle to the site so they could do additional chemical sampling.

EPA actually directed the extensive sampling in all the evacuated homes and we overviewed BKK's installation of the gas-migration control system.

On July 25, EPA was taking additional samples in and around the area and we showed toxic contaminants in another area that was mentioned earlier. Whereas we had been dealing with this area directly south of the site, we found one home on this side that also had high methane levels. Based on that information, that area was evacuated, also, somewhat later.

On July 27, the interagency committee met and there are a number of agencies involved in this. The air quality management district is responsible for air emissions; the regional water quality control board, under State authority, is responsible for any groundwater or surface-water problems; the Department of Health Services is the lead agency for hazardous waste and the city and county actually have responsibilities under State statutes in addition to their own ordinances.

They develop the strategy for further monitoring and criteria for reoccupation. At one time, the position was that as soon as the indicative meters showed that there were no real problems left in the homes, then they would be reoccupied.

The committee decided that to be absolutely sure, we would take specific samples in each home for the contaminants that had been identified earlier.

[Chart.]

Mr. **Seraydarian**. On July 27, based on the additional information found on July 25—that was last Friday—EPA issued a supplemental 106 order. In that order, we expanded it into the southeast area, requiring the same thing, gas-migration control and also the mitigation of some leachate seeps that have been identified that may be contributing to the problem. We also extended the relocation requirements to that same area and clarified some provisions in our orders.

On July 27, there was also a public meeting. It was handled by the Department of Health Services with all the agencies that I mentioned in attendance, including EPA. There was a formal agenda to follow to cover what had been done and what was intended to be done. This was only covered in a brief fashion. The community was concerned. The concerns they raised were: When can it be controlled? I want to be permanently relocated. This has occurred at other sites in the country.

The following weekend, we started additional sampling. We no longer had our complete emergency response team there, but we used some of our field inspectors and some consultant support that is experienced in this kind of sampling. We have been sampling over the weekend in all the houses. It is hoped by August 1, we will have enough information to determine which houses can be reoccupied.

We will also have the information on what has been done by BKK to deal with the gas-migration problem. That decision may be made by the judge today.

Now, what I wanted to add in—and I apologize for the graphics—I wanted to try to explain a simple landfill in the context of BKK when they have solid wastes and hazardous wastes and look at the types of problems that we are concerned with and what should be done to assess those problems and what kind of remedial actions you can take.

These will become part of BKK's proposal to the agencies as far as dealing with the long-term problem. I am hopeful that what has been done to date will deal with the emergency that has just taken place over the last 2 weeks.

Now, to continue with simplified graphics, and this is extremely simplified. Solid waste landfills take solid wastes and if BKK just took solid wastes, they would wind up with gas emissions. Methane is generated at all landfills. As the material biodegrades, it generates the gas.

Solid waste also generates what is called a leachate, and it is basically what leaches out through the material that is deposited. Mixing hazardous waste contributes to the complexity of dealing with the problem. Not only is gas generated, but it is possible that if the gas comes in contact with the hazardous materials that some of those hazardous materials' contaminants can be taken up with the gas. The leachate can also contain hazardous materials.

Now, the theory of BKK is that by mixing solid wastes and hazardous wastes, you are actually having less of a problem generated than if you dealt with the two separately. That has yet to be proven to the satisfaction of most State or Federal agencies.

Now, what are we really concerned with? We are concerned with the air pathway. The possibility of leachate surfacing and causing a problem to surface water by running off the site, and the example was some surfacing in this area at a point in time. When that was identified, it was concluded that the drainage would go to a storm drain and there was no chance of direct contact and that storm drain went down to an unusable section of the surface runoff.

The other major area that we have been focusing on for the last year is ground water. The position that BKK has been taking for the last several years is that there is an impermeable barrier below the BKK site and that no liquid can move through that barrier. Under that condition, they self-certified a ground water waiver, which they can do under RCRA.

When we did our original inspection over a year ago, our conclusion was that they had not justified their ground water waiver. We also had information in the permit submittal that this leachate barrier that they had constructed—and I know this isn't very accurate, but basically not only can you have leachate possibly moving through this impermeable barrier—thus, the question mark—but the leachate can move across this surface and BKK installed several barriers at the site to control that subsurface movement. One is in this area and the other is in this area, which is actually the original natural drainage of this site. So you can imagine that over the years, they have piled up waste and this barrier was to control any, in effect, horizontal movement. We question how effective this barrier was.

So our regulations said that you couldn't dispose of bulk liquid if your leachate collection and barrier system wasn't effective. So what BKK has done in the last several months is gone to a solidification of the hazardous wastes. They mix it with native soils before they deposit it in the landfill. We still have some questions about how effective this is, but it does meet our regulations because they are no longer disposing of bulk liquid.

Now, with the gas migration and the leaching, there are techniques in existence to control that. In any normal landfill, they will have a leachate collection system and pump out that leachate. They will also have gas migration control. Both problems are basically controlled with wells, but different types of wells. So if you have a leachate problem near a barrier, you can pump out that leachate on the top side of the barrier and assure that there is no movement because you create a hydraulic barrier.

With the gas migration, you also sink wells that are parallel and you create a vacuum so that the gas moves toward the wells, and in the case of BKK, it is taken to a centralized flare point. We still have questions about the overall integrity of BKK, but to date, we have not been able to conclude that there is a long-term threat to the public health and the environment.

Let me quickly go through what we expect to have resolved by these additional studies. BKK will do additional air quality monitoring, both on-site and off the site. They will also monitor the present flares to see what kind of destruction they are getting of the normal gases from a landfill and any organics that may be in the gases.

The remedial actions that are already being considered, but would have to undergo an evaluation would be additional gas migration wells. To give you a sense, the last number I heard was that BKK had well over 100 gas wells on the site to control odors and gas migration off the site.

They also intend to increase their flaring and they are proposing a technique to prevent the leachate from coming in contact with the gas so that both systems are controlled separately. They are also looking at a long-term solution of gas recovery with energy generation.

BKK made the decision in 1980 to control the odors and the gas migration. That required putting wells on the periphery of the site and that controls odors effectively. However, if they wanted to generate gas, they were better off putting wells in the center of the site where they have the maximum generation of energy. They have come up with a technique where they believe they can do both.

On the ground water, they will have to do additional geology studies, additional subsurface hydrology studies and specific studies of the barriers that I described earlier because we think there are problems with both of them.

The intent with this study and additional on-site and off-site hydrogeology studies is to desire ground water movement: BKK is in the San Gabriel Basin. We have other problems with organics identified in the San Gabriel Basin. We have yet to identify all the significant sources.

We would not only have them do off-site hydrogeology studies, but also do an inventory of the existing supply wells. Now, there is very little ground water used for public water supplies within a 2-mile radius of BKK, so there is a lot of information that has to be collected about existing wells.

If they do identify problems, they can be corrected by additional reinforcement of the liners and the barriers; they could eventually put in an encapsulation system for any new waste; they could control subsurface migration through the use of wells and some type of underground channels. They can also control leachate disposal and right now, BKK is proposing treating their leachate disposal on-site.

They can also use ground water pumping to control the movement of ground water. When you pump a well hard enough, you basically create a hydraulic barrier. If you put enough wells in a row, you can create, in effect, a water barrier to stop the movement.

Surface waters right now are our least concern. To date, we have not identified a problem, but we will ask them to do additional work on surface hydrology. That is the runon and runoff to the site, normal rain water and water that is coming on to the site from other sources. They can control runon by diversions. They can control runoff through different techniques available to solid and hazardous waste sites and they can improve recovery so that there is less movement of water through the waste at the site.

What I have tried to describe is what can be done. If at any time EPA or the State agencies conclude that the assessment shows that it is not going to be correctable, or we have a significant problem and the operation at the site is contributing to that problem, then we would consider closing the site or at least a phased closure of the site.

In effect, we have instituted a phased closure at the site by our actions over the last year. The amount of hazardous waste going to BKK dropped 50 percent from March 1983 to March 1984. I don't have recent assessments available to me, but I have been told that there has been a progressional dropoff of hazardous waste going to the site.

I hope I haven't taken too long, but I wanted to cover the basics of the BKK site, and I guess with that, we will be available to answer any questions.

Thank you.

[The BKK landfill chronology of events follows:]

CHRONOLOGY OF EVENTS AT BKK LANDFILL
SEPTEMBER 1983 - PRESENT

APRIL 1983 CITY OF WEST COVINA SENDS LETTER TO CA DEPT. OF HEALTH SERVICES REQUESTING AN "SB 501" HEARING BE HELD TO DETERMINE IF BKK THREATENS HEALTH AND ENVIRONMENT.

JUNE 3, 1983 HOUSE SUBCOMMITTEE ON ENERGY, ENVIRONMENT AND SAFETY HOLD A FACT-FINDING FIELD HEARING ON THE OPERATIONS OF THE BKK LANDFILL IN WEST COVINA.

JUNE 1983 CA DEPT. OF HEALTH SERVICES DENIES WEST COVINA'S REQUEST TO HOLD AN "SB 501" HEARING ON BKK.

SEPTEMBER 1983 EPA REPORT SHOWS BKK LANDFILL IN VIOLATION OF 18 FEDERAL ENVIRONMENTAL LAWS

DECEMBER 1983 BECAUSE OF THE DISCOVERY OF CONTAMINATED WATER AT THE BKK, EPA ORDERS A PHASE OUT BAN OF HAZARDOUS LIQUID WASTE AT THE LANDFILL.

APRIL 20, 1984 EPA ORDERS 70 PERCENT OF BKK HAZARDOUS WASTE DUMPING AREA CLOSED DUE TO THE MIGRATION OF CONTAMINANTS ON ITS SOUTHEASTERN SIDE.

APRIL 26, 1984 TORRES CALLS FOR CLOSURE OF THE BKK AND REQUESTS CALIFORNIA GOVERNOR DEUKMEJIAN TO DEVELOP A PLAN FOR THE DISPOSAL OF HAZARDOUS WASTE AT FACILITIES OTHER THAN THE BKK LANDFILL.

MAY 2, 1984 DIRECT DUMPING OF HAZARDOUS LIQUID WASTE IS BANNED AT THE LANDFILL, BUT THE BKK BEGINS MIXING LIQUIDS WITH SOIL BEFORE DISPOSAL.

JULY 17, 1984 19 FAMILIES ON BKK'S SOUTHERN SLOPE ARE EVACUATED BECAUSE METHANE GAS FROM THE LANDFILL IS DISCOVERED IN THEIR BACKYARDS.

JULY 18, 1984 TORRES CALLS FOR THE CLOSURE OF THE BKK

JULY 19, 1984 CANCER CAUSING VINYL CHLORIDE FROM THE BKK IS FOUND IN TWO HOMES WITHIN THE EVACUATED AREA.

JULY 25, 1984 TORRES CALLS FOR THE CLOSURE OF THE BKK

JULY 25, 1984 HEALTH OFFICIALS EVACUATE TWO MORE FAMILIES LIVING MORE THAN A HALF-MILE FROM THE 19 FAMILIES BECAUSE VINYL CHLORIDE IS DISCOVERED IN THEIR HOMES AND BACKYARDS.

JULY 26, 1984 22 SOUTHERN CALIFORNIA MEMBERS OF CONGRESS SEND A LETTER TO EPA ADMINISTRATOR WILLIAM RUCKELSHAUS REQUESTING HE CLOSE THE BKK LANDFILL.

JULY 27, 1984 THE HOUSE SUBCOMMITTEE ON ENERGY, ENVIRONMENT AND SAFETY INVITES RUCKELSHAUS TO TESTIFY ON THE SUMMARY OF EVENTS AT THE BKK LANDFILL AND WHAT MEASURES HE HAS IMPLEMENTED TO CORRECT THE PROBLEMS AT THE FACILITY.

Mr. TORRES. Mr. Chairman.

Mr. STENHOLM. I recognize Mr. Torres for questions.

Mr. TORRES. Thank you, Mr. Chairman.

Before I forget, Mr. Chairman, I thought you might want to know that Mr. Bedell has joined us with the committee. I thank you, Mr. Bedell, for joining us.

I want to thank Mr. Thomas for his introductory remarks and the role that EPA plays in the independent inspection of ambient air and what is happening. Of course, Mr. Seraydarian has put together for us a very comprehensive chronology of events up to, I guess, July 28. I would like to perhaps touch on that base with a question.

When were the last tests performed? Could you give me an indication of when the last tests of the ambient air.

Mr. SERAYDARIAN. They are ongoing right now.

Mr. TORRES. They are ongoing at this moment?

Mr. SERAYDARIAN. We do it through August 1st.

Mr. TORRES. Can you tell us whether these test results have been made public and could you share with the committee the results of such investigations?

Mr. SERAYDARIAN. I can only relay what I heard on the phone this morning from my staff back in San Francisco and that was that indications are that there are no problems at the houses, but they want to assure that by monitoring over at least a 3-day basis with not only the meters, but specific organic sampling.

BKK supposedly has enough information to show——

Mr. TORRES. As you know, we have 15 minutes to get to a vote and I would like to very expeditiously raise a question with you. Could you tell me what the following compounds are and what concentrations were found there—BKK would probably have some notion by now—and interpret those statistics to me.

Vinyl chloride. What is that and what was measured in vinyl chloride?

Mr. SERAYDARIAN. The vinyl chloride is generated by different manufacturing of plastics. It was identified as a problem at BKK in 1980 and 1981 and was banned, but there is still vinyl chloride in the site and you have vinyl chloride generated at any solid waste facility because of the plastics that are disposed of there.

It is considered a suspected carcinogen and——

Mr. TORRES. It is not a——

Mr. SERAYDARIAN. It is a suspected carcinogen.

Mr. TORRES. It is.

Mr. SERAYDARIAN. And the State of California has established an ambient action level of 10 parts per billion.

Mr. TORRES. What is the effect of that on humans?

Mr. SERAYDARIAN. It is difficult to judge that action level because it is based on long-term effects and you would have to be exposed over a long period of time to have any health effects.

Mr. TORRES. But cancer is an end product, is it not?

Mr. SERAYDARIAN. It could be, yes.

Mr. TORRES. What about benzene?

Mr. SERAYDARIAN. Benzene is also a suspected carcinogen.

Mr. TORRES. Is it prevalent in these tests that have been occurring here?

Mr. **Seraydarian**. It showed up in at least one sample, yes.

Mr. **Torres**. At what level, do you know?

Mr. **Seraydarian**. I don't know that offhand, but I might have some information that includes that that I could give to you.

Mr. **Torres**. How about the chemical toluene?

Mr. **Seraydarian**. That was found also.

Mr. **Torres**. Do you know what amount and how high a level?

Mr. **Seraydarian**. No, but I can give you that.

Mr. **Torres**. You can give it to us today?

Mr. **Seraydarian**. I believe the information is in the package that BKK submitted.

Mr. **Torres**. We will check that, then.

How about chloroform?

Mr. **Seraydarian**. I don't believe that was found.

Mr. **Torres**. I am naming these because I have an indication that these were the nine compounds or nine chemicals that were found in the escaping gases in these homes. So that was one, chloroform.

What about something known as TCE or trichloroethene, very poisonous. Do you know in what amount this was found?

Mr. **Seraydarian**. No, but I can find that out.

Mr. **Torres**. Today?

Mr. **Seraydarian**. I can provide that to you today.

Mr. **Torres**. What about TCE or carbon tetrachloride?

Mr. **Seraydarian**. They were both found.

Mr. **Torres**. They were both found. Do you know in what amount and at what level?

Mr. **Seraydarian**. No, but I have that information available.

Mr. **Torres**. What about trichloroethene?

Mr. **Seraydarian**. It is very similar to TCE.

Mr. **Torres**. TCE. What about perchloroethene, otherwise known as PCE?

Mr. **Seraydarian**. That was found in trace amounts, too.

Mr. **Torres**. And you will tell us in what amounts and levels?

Mr. **Seraydarian**. Yes, I can tell you what was found——

Mr. **Torres**. And, of course methane.

Mr. **Seraydarian** [continuing]. At the first effort. Methane was, of course, found.

Mr. **Torres**. Now, what is the combined effect of all these chemicals at the levels that you are going to show us and has been measured on the residents of the people around BKK? What would be the compounded results on people?

Mr. **Seraydarian**. I would say that the compounded results would be very limited. Now, I am not——

Mr. **Torres**. Very limited?

Mr. **Seraydarian**. Yes; I am not a toxicologist, but the compounds did exceed the action levels, but the action levels are established as ambient levels for long-term exposure. The exposure was short and it didn't exceed what would be considered an action level for chronic effects.

What established the emergency and the evacuation was the potential for explosion.

Mr. **Torres**. Yes, but let me state that the reasons for evacuation were discovered simply, as the chairman pointed out earlier, by accident because the Southern California Gas Co. was checking what they thought was a leaking gas main, and instead discovered that these gases were escaping in residents' homes.

What would have happened had the gas company not accidentally discovered this, and how long has this been going on? After all, we know that methane is a dangerous gas; it is colorless; it is odorless. How long has this been happening?

Mr. SERAYDARIAN. I don't believe that it could have been happening over a long period of time because the air quality management district requires BKK to monitor periodically and BKK would have to submit a comprehensive sampling plan to the air quality management district.

Mr. STENHOLM. Would the gentleman yield on that?

Mr. TORRES. Yes, I yield to the chairman, certainly.

Mr. STENHOLM. Have you established that the methane gas is, indeed, coming from the landfill?

Mr. SERAYDARIAN. Yes.

Mr. STENHOLM. That is established?

Mr. SERAYDARIAN. Yes.

Mr. STENHOLM. We might take about a 15-minute recess now while you get the information you promised Mr. Torres and we will be back in 15 minutes.

Mr. SERAYDARIAN. Thank you, Mr. Chairman.

[Recess.]

Mr. STENHOLM. We will reconvene this hearing and continue with questions from Mr. Torres.

Mr. TORRES. Thank you, Mr. Chairman.

I believe we last left off when we were talking about the various compounds or chemicals that have been tested to be found in the air and I wanted specifically, though, to hone in on vinyl chloride, which I think is a dangerous chemical.

What are the levels of vinyl chloride that are being found currently at the residential sites?

Mr. SERAYDARIAN. Currently at the residential sites, the information I have is they aren't finding any methane and they aren't finding any specific organic contaminants, but we want to continue that testing. You had asked originally what the levels found——

Mr. TORRES. But I want specifically indicators and I know there were some initially—as to the levels of vinyl chloride. They were 500 to 900 parts to 1 billion——

Mr. SERAYDARIAN. What I would like to submit for the record is a copy of our administrative order, which includes a summary of the air quality management district's original sampling. We will obtain copies of the actual sample results and submit it to the committee, but right now, the best I have is the listing of the contaminants and the range of concentrations that were originally identified.

Mr. TORRES. But would you have knowledge—again, about my question as to the levels of vinyl chloride. I think they were made public in the media and in discussions with EPA people and were in the range of 500 to 900 parts per billion?

Mr. SERAYDARIAN. Yes; that was documented in our order.

Mr. TORRES. Am I correct to say that that is 99 times the acceptable standard?

Mr. Seraydarian. Right; the State action level was 10 parts per billion.

Mr. Torres. The acceptable standard is——

Mr. Seraydarian. Ten parts per billion.

Mr. Torres. And so far, they have found 99 parts per billion.

Mr. Seraydarian. As high as 990 parts per billion.

Mr. Torres. Thank you.

Mr. Stenholm. Would the gentleman yield for a followup on that specific question?

Mr. Torres. Yes, I yield to the chairman.

Mr. Stenholm. Do you have any way of knowing what the source of this vinyl chloride may be?

Mr. Seraydarian. As I mentioned earlier, you can have vinyl chloride at landfills that only accept solid wastes and it can be——

Mr. Stenholm. The plastic bags that we put our garbage in could be vinyl chloride.

Mr. Seraydarian. Right, but BKK did have a large amount of vinyl chloride disposed historically and that was the original source. It was banned, I believe, in 1981, but there is still vinyl chloride in the site.

Mr. Bedell. Would the gentleman yield? The plastic bags are never made of vinyl chloride. They are made of polyethylene, normally. Vinyl chloride is a stiff plastic. This [indicating a ballpoint pen] could be vinyl chloride.

Mr. Stenholm. I stand corrected. I was told that they were.

Mr. Torres. Mr. Chairman, if I may continue, I would like to ask the gentleman: What level of vinyl chloride constitutes, in your opinion, an imminent and substantial endangerment?

Mr. Seraydarian. Right at the moment, I couldn't give you EPA's emergency action level, but we would probably use the State's ambient action level to determine whether some action is necessary, and that is exactly what we did in this case.

Mr. Torres. You are using a State standard at this point, then?

Mr. Seraydarian. Right.

Mr. Torres. May I continue with my questioning, Mr. Chairman?

Mr. Stenholm. Go ahead.

Mr. Torres. I would like to know at this time exactly what is the relationship between EPA and the BKK landfill? I know you expressed that in your chronology, but specifically, what is that relationship? EPA is now maintaining an independent investigative authority over the landfill, separate from the State?

Mr. Thomas. Between you and me, let's see if we can't clarify because EPA has a relationship and responsibility to BKK and the State of California does as well. As Harry indicated, we have issued several administrative orders which are our administrative enforcement authority under the RCRA statute to BKK, so, therefore, we have a formal relationship in the context of those administrative orders where we have required BKK to do certain things; BKK has to do that or suffer certain penalties.

The second area of formal relationship between EPA and BKK is in the context of issuance of a permit. The EPA still has the authority for issuing or denying the permit for the operation of the BKK facility under the RCRA program and the regional office is in the context of reviewing their permit application.

Now, the State of California, in addition to a variety of authorities in the water and land area, also has authorities under the RCRA program under delegated responsibilities that we have given them, based on their State statute, for inspection and enforcement of the BKK facility. They also have issued orders in that regard, so there is a formal relationship there in the context of orders.

There are broad State authorities as well dealing with the BKK facility and, Harry, you may want to elaborate on some of that.

Mr. SERAYDARIAN. Lee made an excellent statement about our overview, but we also have the independent authority. What we have been attempting to do with BKK is make sure that everybody coordinates their efforts and, where it is necessary, we all take parallel actions so that last action in the chronology where we ordered BKK to do additional remedial investigation, the Department of Health Services and the Regional Water Quality Control Board took parallel actions under their authority.

Mr. TORRES. What I am trying to narrow down here is that I have been informed by officials at EPA's regional and Washington offices here that the Agency has no authority to close the BKK and that this is the responsibility of the State of California. Is this true?

Mr. THOMAS. No; the agency has the authority to close the BKK facility, as does the State of California. We could take action in the context of the permitting process or we could take independent action through our enforcement authorities. Now, both of those actions would be fully coordinated with the State of California, but the agency has the authority to proceed.

Mr. TORRES. Thank you. I have no questions at this time, Mr. Chairman.

Mr. STENHOLM. Mr. Dreier.

Mr. DREIER. Thank you very much, Mr. Chairman.

While I think it is great for us to hear from someone from EPA and that we now have you on record as having the capability of being able to close the site—and we are very pleased with that—we are also aware of a great many potential problems, illegal dumping and things like that.

I would like to ask just a couple of questions. First, my friend, Mr. Torres, went through the litany of items, benzene TCE, other items which obviously were found at those homes. You would have no idea whatsoever as to what date those chemicals would go back to, would you? I mean, there would really be no way of determining that. They could be 15 years old, is that a safe assumption?

Mr. SERAYDARIAN. They have landfill models that can predict methane generation, but I doubt that they have any models that would be sophisticated enough to relate specific organic contaminants.

Mr. DREIER. What I am basically getting at is that 4 years ago this October, I was castigated by all the people who are now calling for the closure of the dump. I was told that I was immature, irrational, taking a wrong step. Members of the city council blasted me. I was really viciously attacked and it was 4 years ago that I first called for that closure.

What I am wondering is, if, at that time, we had begun the phaseout, would we have prevented what occurred among those 19 homeowners?

Mr. **Seraydarian**. No.

Mr. **Dreier**. No. In other words, you are confident that those chemicals which are there would have been pre-1980.

Mr. **Seraydarian**. If BKK closed right now, they would still have gas with toxics in it generated for a long while.

Mr. **Dreier**. You have told us that there is a 50-percent reduction in the flow. Based on—what time did that start, the 50-percent reduction?

Mr. **Seraydarian**. We issued our order the end of December of 1983 and in that order, we required a phased reduction of the bulk liquids accepted by EPA. The first month was 20 percent, the second month was a 40-percent reduction and within 120 days, they either had to demonstrate that they were solidifying bulk liquids or that the leachate barrier functioned effectively.

So during that time, they reduced it, but it wasn't because they consciously went to their generators and said, "We're not going to take anything above this limit this week." It was just a natural reduction because of the extensive enforcement actions at the site. Generators stopped sending their waste to BKK.

Mr. **Dreier**. Based on your schedule, which began, as you said, in December of 1983, at what point could you totally phase out the dumping?

Mr. **Seraydarian**. If they had not corrected the problem by the beginning of May, then our order would have instituted a bulk liquid ban. However, as I mentioned, the administrative law judge nullified our order. So, in effect, they would have met the mandate of our order. They did have solidification by the beginning of May.

Mr. **Dreier**. Have you all——

Mr. **Wise**. Excuse me.

Mr. **Dreier**. Go ahead.

Mr. **Wise**. May I elaborate on that particular point, and I just want to clarify for the record that the BKK facility accepts two separate streams of waste: One, a waste stream deamed to be hazardous and subject to direct regulation by both EPA and the State of California. The other waste stream being municipal garbage.

Any attempt to close a site has to deal with both concurrent waste streams. As we have learned from the technical presentation.

Mr. **Dreier**. What is the reason for that?

Mr. **Seraydarian**. The problem that we are presently experiencing is based upon the historical pattern of solid waste disposal in that landfill, waste which is now biologically decomposing and producing methane. So we have to deal with both waste streams under separate regulatory authority.

Mr. **Dreier**. All right.

Mr. **Seraydarian**. I wanted to clarify that because it is an important point.

Mr. **Dreier**. I see that. It was outlined in our beautiful guide that we had there.

Mr. **Torres**. Will the gentleman yield?

Mr. **Dreier**. Yes, sir.

Mr. **Torres**. If you could yield for a clarification of that. It is my understanding, under section 7003 of the Resource Conservation Recovery Act, RCRA, and, for the gentleman's information and others in the room, I will just cite the language referring to what you just said:

> Notwithstanding any other provision of this Act, upon receipt of evidence that the handling, storage, treatment, transportation or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to health or the environment, the Administrator may bring suit on behalf of the United States in the appropriate district court to immediately restrain any person contributing to such handling, storage, treatment, transportation or disposal to stop such handling, storage, treatment, transportation and disposal.

It deals with both of them. It deals with solid waste or hazardous waste so the two are really incumbent in the legislation, am I not—in the act.

Mr. **Thomas**. Mr. Torres, you are right in——

Mr. **Torres**. As opposed to saying that——

Mr. **Thomas**. You are right.

Mr. **Torres**. It is one or the other.

Mr. **Thomas**. That section 7003 is the primary enforcement authority that we have and is a section that I was referring when I responded to the question about did we have the authority to take action to close the facility. You are correct. That is exactly the section that we would use as far as our enforcement authorities are concerned.

Beyond that, we also, in the context of the permitting process for the hazardous waste portion of the facility, do have additional authorities to restrict the hazardous waste portion. But you are right, 7003 deals with broader than just hazardous waste. It deals with solid waste as well.

Mr. **Stenholm**. Would the gentleman yield to me?

Mr. **Dreier**. Happy to yield to the chairman.

Mr. **Stenholm**. With regard to the other authorities, are you referring to section 106 of the Superfund?

Mr. **Thomas**. Section 106 is not the authority I was referring to. That also is certainly broad enforcement authority that we have under the CRCLA statute and we have used that at the BKK facility. As Harry Seraydarian indicated in our last order issued to require that they do certain things in this latest emergency situation, we used CRCLA authority. The authority I was talking about were the sections that deal with the permitting of the facility. So we have enforcement authorities and we have the permitting program that Congress authorized.

We can, in the context of making a determination as to whether to issue a permit to BKK for the disposal of hazardous waste, which is a process that is currently ongoing, make a determination to either approve or deny that permit.

Mr. **Dreier**. Mr. Chairman, I would like to ask one other question and then I will be quiet and leave for a meeting I have to attend, but I do thank you again—I am not a member of this subcommittee. I appreciate being included very much.

One of the things that I found when I first came here is that fact that there are a great many buildings and a great deal of Federal land which is sitting basically dormant. We are faced with a tremendous deficit and everyone knows about that.

I have advocated over the 4-year period that I have served here a selling off of a portion of that. I was wondering if you all actually have—and I have asked for this and really not gotten it before—done any determination on land which potentially in southern California could be used as a site for toxic waste dumping, which would obviously be in a totally uninhabited area. I know it is very difficult to find a place which would not stir some kind of controversy, but—and I know it can't go right into the desert because I know of the problems that exist there—if there is any Federal land at this point which potentially could be used as an alternative site so we could move ahead with our speedy program to phase out the site in West Covina?

Mr. **Thomas**. Well, actually the whole issue of use of Federal lands has been explored by the Agency in past years. The National Governors' Association, for instance, had a review of the whole issue of use of Federal lands versus State authority a number of years ago and came out with a report that expressed a number of concerns about doing that vis-a-vis State authority to control or not control the disposal of waste if it was going on Federal land within a particular State and we are very concerned about that.

Additionally, there is also, as you indicated, a series of environmental issues associated with using Federal land. What Federal land would you use? Certainly you wouldn't want to use any of our national parks or any other kind of land that we are very concerned about in the Federal Land Management System.

I personally got involved in the issue last year. I don't know whether you recall an article in the Washington Post that talked about the possible use of Federal land for disposal of hazardous waste. I was the recipient of an awful lot of mail concerning the potential of using Federal land from people who were very much opposed to us thinking about Federal land.

That proposal was an exploratory review of the potential of using contaminated Federal land for storage of some hazardous waste, pending disposal, using contaminated Federal land.

Mr. **Dreier**. You never advocated filling the Grand Canyon or anything like that?

Mr. **Thomas**. Absolutely not. It was just a very—but we received a tremendous amount of opposition to even review. It had not been proposed, but even reviewing the potential of using contaminated—and by "contaminated," we were thinking in terms of some specific Defense Department reservations that were contaminated because of ordinance and past practices that we thought might be suitable locations for storage pending disposal of some of the contaminated soils that we had where we didn't have proper disposal techniques or technology hadn't caught up with the disposal.

So there is a tremendous controversy associated with the concept of disposal of hazardous waste, whether it be Federal land or whether it be other locations, but the concept has been reviewed on a number of occasions in the past.

Mr. **Dreier**. Mr. Chairman, I again appreciate very much being included here today. I would like to say that I am very pleased with the work that my colleague, Mr. Torres, has done, and as I said, I no longer represent this specific area. But he is focusing attention on it and I think we all need to—it is a national problem now which we are all faced with and I, as I said earlier, hope and pray that we will speedily see an end to these problems. There are a lot of people whom I have just—I don't know personally, but I have seen on the television and in the newspapers—who are extraordinarily distressed, as would any of us if we were to be forced out of our homes.

Thank you very much, Mr. Chairman.

Mr. **Stenholm**. With regard to the last questioning, I would make this observation: Having had two of the five proposed sites for a low-level nuclear waste site within the State of Texas located in my district, I believe it is safe to say there is no place in the world that will not have some controversy for the disposal of hazardous waste, whether they be nuclear or otherwise.

Mr. **Thomas**. That certainly has been my experience.

Mr. **Stenholm**. Mr. Bedell.

Mr. **Bedell**. Thank you, Mr. Chairman.

I am here more to learn than anything. There are one or two questions that I would like to ask. First of all, apparently you do have authority over both toxic waste and the solid waste disposal. Is that correct?

Mr. **Thomas**. We do as far as enforcement authorities are concerned. There is a division, though, as far as our regulatory program. We have a full regulatory program for hazardous waste. The solid waste component of the RCRD statute, which is subtitled D, is a State-administered program, where we establish criteria, but the State actually implements the program on a voluntary basis.

We don't have the regulatory program for solid waste like we do for hazardous waste, but we pick up authorities under that enforcement section that Congressman Torres recognized, 7003.

Mr. **Bedell**. Do you have authority over the States in those cases if it appears that the States are not properly following——

Mr. **Thomas**. In hazardous waste, we do.

Mr. **Bedell**. No, in solid.

Mr. **Thomas**. In solid waste, we don't, unless the facility presents an imminent and substantial endangerment, which is where we would then have the authority to take action. That obviously, is a much more narrow exception than in our hazardous waste program where we have broad regulatory authorities to overview the State action.

Mr. **Bedell**. My next question is: If there were bacterial contamination from garbage seeping into the ground water, and if no action was taken to prevent this, would that contamination be filtered out naturally a certain distance from the site or would it stay in the ground water? How serious a problem might this be if the garbage contaminated ground water, near a populated area?

Mr. **Thomas**. Well, it certainly would depend on the individual site situation. In many, many cases, you would not have any kind of contamination problem in ground water as a result of a solid waste land disposal facility either because of what is leaching—it is not a serious contaminant or because there is a cleansing process or because the ground water itself is not flowing into any particular aquifer that either would be used or would have the potential for use.

Mr. **Bedell**. That is not really my question. My question is: Supposing there was contamination of ground water, because the ground water was in contact with a garbage dumpsite. Does an aquifer flow in such a way that it would naturally correct a bacteria problem or would the bacteria stay in the water wherever it goes? Would a house a half mile away have to be concerned over the fact that there was contamination of the ground water? That is my concern.

Mr. **Thomas**. I don't know. Gene, you may want to respond to that.

TESTIMONY OF GENE LUCERO, DIRECTOR, OFFICE OF WASTE PROGRAMS ENFORCEMENT, ENVIRONMENTAL PROTECTION AGENCY

Mr. **Lucero**. Congressman, you ask a difficult question. Going back to the sort of rough diagram that Mr. Seraydarian used, if you think of the situation at BKK and the fact that within the soil beneath the facility that there are different strata involved, depending on where the contaminants are moving, it is possible that they will then migrate off site as the water moves and it has been pointed out that the water at the site may be moving in different directions at different points.

It is not possible now, other than to treat your question as a hypothetical, to give you an accurate answer for BKK.

Mr. **Bedell**. I am not talking about BKK.

Mr. **Lucero**. Right. There are certain factors you would want to consider. If bacterial contamination were of concern, there are several things that occur in the process that might affect the kind of bacterial contamination that you are concerned about, such that it may never enter the ground water.

Mr. **Bedell**. But if it does enter the ground—my question is—and I know it is theoretical.

Mr. **Lucero**. Right.

Mr. **Bedell**. I have such a problem in my district——

Mr. **Lucero**. OK.

Mr. **Bedell**. Dumping, which I think is probably true of almost every Member of Congress.

Mr. **Lucero**. If it does enter the ground water and if the bacterial contaminants that you are concerned about can survive in that particular strata, assuming if they are—if they need oxygen, they will have to get oxygen, and they move to a point—if there is a discharge point where the aquifer comes to the surface, then there can be seepage or there may be a well, in which case the material can rise.

Otherwise, what you would expect to happen is over time certain of that material would adhere or at least be slowed down. The ground water tends to move very slowly and over time, you will see a dispersion of the material and it will eventually—if it is moving in a direction and it is not being retarded in some way, it will eventually migrate some distance. How far and when it reaches an area would depend on the factors at the site.

You would have to do testing and some analysis before you could actually say whether it would reach a point that you are concerned about or not. You can say hypothetically it may, but you can't, without further data, predict exactly whether and when it will occur.

Mr. **Bedell.** I wanted to get educated on this matter. I don't want to take too much time, but if there were a sanitary landfill with wells nearby, and if testing of the water in those wells indicated bacterial contamination, is that something that the people who live a half a mile away should be possibly concerned about, or is that something that probably would be corrected anyway and if you live that far enough away from it, you shouldn't worry that much about it? That is my question.

Mr. **Lucero.** If you had that type of contamination at that point, I think there is enough reason to be concerned that you would want to do some additional analysis to determine whether it was moving in the direction of the people you are concerned about.

Mr. **Bedell.** Thank you.

Can I ask one quick question, Mr. Chairman, since we have them there? I don't even know if you folks are the people I should talk to about this, but I do have a problem in that you sent out a bunch of questionnaires to people in regard to whether or not they were producing any hazardous waste, as I understand it.

I had a constituent who didn't produce any hazardous waste who thought he probably ought to be registered in case he ever did. He got the questionnaires and since they didn't apply to him, he didn't send them back. They now are trying to fine him $1,200 because he didn't send the forms in. That seems pretty ridiculous to me. It seems that he had every reason to think he didn't need to return the forms since he didn't produce any wazardous waste. Is this customary? Are you just fining people like crazy on this? Do you know?

Mr. **Thomas.** No, we are not. I would be more than happy to look into that situation for you. It doesn't sound to me like it makes sense, either. There are two things that may be going on.

One is, we have sent out an extensive survey to small businesses all over the country. We have done it in close coordination with a lot of trade associations of small businesses. It is being done in the context of the small quantity exemption in the current RCRA bill that Congress is in the process of modifying and we, through our regulations, are modifying and we are trying to, before we develop those regulations, better define who those small-quantity generators are, how they are currently disposing of waste, what their current generation practices are and the type of waste. So it was a broad survey and I don't know whether that was the survey you were referring to or not, but it may well have been.

I can't imagine there would be anything associated with a fining process related to that survey. However, there may well be a process—if the individual had filed a part A application indicating that he was a generator of hazardous waste or a treater of hazardous waste or had applied for a generator number from the agency——

Mr. **Bedell.** That is what he did.

Mr. **Thomas.** He did?

Mr. **Bedell.** He applied for a number.

Mr. **Thomas**. OK. He applied for a number; thereby indicating that he was a generator of hazardous waste. The two things may be getting mixed, I don't know, but I would be more than happy to get that from you. But that is the first indication I have heard of anything like that, and we have completed that survey.

Mr. **Bedell**. Well, I can tell you what I found. I talked to EPA's district office and they said that it is up to Washington to decide and I talked to Washington and they said it is up to the district to decide. The district said they are fining a lot of people.

Mr. **Thomas**. Which district is it, Congressman?

Mr. **Bedell**. Kansas City, I think. Do you have an office there?

Mr. **Thomas**. Sure, our region VII office.

Mr. **Bedell**. Well, they first fined him $3,500 and decided they were going to lower it to $1,200 or so. They lowered it and they said, "We lowered it that much so we don't see how we can lower it any more than we do for anybody else."

This guy never generated any hazardous waste at all. All he thought was he ought to get a number in case he started to.

Mr. **Thomas**. I would be happy to look into that and work with you on it.

Mr. **Bedell**. Thank you, Mr. Chairman. I appreciate your willingness.

Mr. **Stenholm**. As I mentioned in my opening remarks, we asked CRS to provide Dr. Michael Simpson for staff counsel on this hearing.

At this time, I would like to recognize Dr. Simpson for any questions he might like to ask.

Dr. **Simpson**. Thank you, Mr. Chairman.

Mr. Seraydarian, do the rules and regulations as they apply in California require only ambient or outdoor air to be monitored around the BKK landfill?

Mr. **Seraydarian**. The air quality management district has extensive authority under the State statutes. They could require monitoring at the flares; they could require ambient monitoring; they could require periodic monitoring right at the wells. Right now, they are waiting for submittal from BKK for an extensive continuous monitoring program.

Dr. **Simpson**. In the information that was provided in the order that has been put into the record, there were a number of chemicals listed in various concentrations for each of those chemicals.

[The order in docket 84-13 follows:]

BEFORE THE UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:

BKK CORPORATION

Respondent.

Proceeding under Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §9606

Docket No. 84-13

ORDER

This Administrative Order ("Order") is issued to the above-named Respondent by the United States Environmental Protection Agency ("EPA"), pursuant to Section 106(a) of the Comprehensive Environmental Response Compensation and Liability Act of 1980 ("CERCLA"), 42 U.S.C. §9606(a), by authority delegated to the undersigned by the Administrator of the United States Environmental Protection Agency. Notice of the issuance of this Order has been provided to the State of California.

FINDINGS OF FACT

1. Respondent is a California corporation which owns and operates a facility for the treatment, storage, or disposal of hazardous wastes ("the BKK Facility"), located at 2210 South

Azusa Avenue, West Covina, California 91792. For the purpose of this Order, the term "Facility" means the 583 acres of real property included in the legal description attached hereto as Attachment 1 and incorporated herein by reference.

2. The Facility is bordered on the south and west sides by residential development. On the southern side, homes are situated adjacent to the Facility boundary.

3. On December 22, 1980, the State of California Department of Health Services ("DOHS") issued an Interim Status Document ("ISD") for the BKK Facility pursuant to California Health and Safety Code Section 25200.5. This ISD has been amended since its issuance, including an amendment modifying Part X.4. of the ISD, issued on January 4, 1984.

4. On June 8 and 9, 1983, EPA and DOHS conducted a joint inspection of the BKK Facility. The EPA inspector alleged violations of various hazardous waste requirements contained in the ISD and in 40 CFR Part 265.

5. On or about August 1, 1983, Respondent submitted a RCRA Part B permit application to EPA pursuant to the Resource Conservation and Recovery Act ("RCRA") 42 USC 6901 et seq. The Part B application contained statements and analytical results which indicate contamination in a monitoring well beyond Barrier No. 1 at the BKK Facility.

6. On December 20, 1983, BKK and DOHS entered into an Agreement which requires, inter alia, that BKK perform certain tasks to study and improve conditions and operations at the BKK facility and that BKK pay $47,500.00 to DOHS "in recognition

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of the costs incurred by [DOHS] in providing BKK with onsite direction, evaluation, and planning assistance...."

7. On December 29, 1983, EPA issued a Determination of Violation, Compliance Order and Notice of Opportunity to Request a Hearing ("Complaint"), which charged BKK Corporation with violations of Chapter 6.5 of Division 20 of the California Health and Safety Code, which also incorporates the requirements of Subtitle C of RCRA, 42 USC 6921 _et seq_., by reference. On February 2, 1984, BKK moved for summary dismissal of the Complaint, which was granted on April 18, 1984 by Administrative Law Judge Spencer T. Nissen. EPA has appealed this dismissal and that appeal is pending.

8. On March 28, 1984, as part of a site characterization study, Respondent completed drilling a core hole, Boring C3, in the southeast area of Respondent's property approximately 100 feet from a residential area. The coring logs of Boring C3 indicate the presence of a sandy, water-bearing strata which may act as a conduit for migration of contaminated ground water and landfill gas from the area of the hazardous waste landfill.

9. On April 27, 1984, EPA and BKK entered into an Administrative Order on Consent pursuant to Section 3013 of RCRA, 42 U.S.C. 6934. This Order requires, _inter alia_, that BKK submit a proposal to EPA for the investigation, including monitoring, testing, analysis, and reporting of any hazardous waste migration from the BKK facility and to implement such proposal, upon approval by EPA. The BKK proposal was submitted on May 29, 1984. This proposal is under review by EPA and various State and local agencies at this date.

10. To date, Respondent has not completed: 1) a full hydrogeologic characterization of the facility; 2) a complete assessment of the nature and extent of contamination on site; and 3) a ground water monitoring system capable of detecting migration of hazardous waste from the facility.

11. Since June, 1981, the South Coast Air Quality Management District ("SCAQMD") has conducted ambient air quality monitoring on a regular basis at two (2) monitoring stations within the residential area near Respondent's facility. At the present time, five (5) stations are being monitored. From January through June, 1984, SCAQMD's monitoring has indicated twenty (20) incidences of exceedances in the California ambient air quality standard for vinyl chloride (10 parts per billion) at these off-site locations.

12. On July 17, 1984, the Southern California Gas Company detected methane gas at levels exceeding the Lower Explosive Limit (LEL) in the yards of residences on Lynn Court, Nanette Avenue and Leanna Drive in West Covina, California, adjacent to Respondent's facility. The LEL for methane, as provided in 40 CFR §257.3-8, is 5-15% methane in air. Levels recorded by the Southern California Gas Company ranged between 5-100% methane at the following addresses:

2307 Lynn Court
2322 Lynn Court
2041 Nanette Avenue
2401 Leanna Drive

13. In response to the discovery of methane gas described in paragraph 12, the City of West Covina, as a precautionary

measure, evacuated nineteen (19) homes on the evening of July 17, 1984 due to the risk of explosion from the methane gas. The four homes at which elevated levels of methane were detected were evacuated, as well as those homes between and adjacent to those homes.

14. On July 18, 1984, local and state agencies sampled air quality in two (2) of the 19 evacuated homes. SCAQMD's analytical results from these samples are as follows:

Address	Compound	Concentrations
2322 Lynn Court	Vinyl Chloride	500-990 ppb
	Benzene	120-1200 ppb
	Toluene	60-98 ppb
	Chloroform	7.4-8.3 ppb
	1,1,1 trichloroethane	6.3-9.1 ppb
	Carbon tetrachloride	.49-.56 ppb
	Trichloroethylene	10-71 ppb
	Perchloroethylene	35-56 ppb
	Methane	.37-.77%
2041 Leanna Street	Vinyl Chloride	5-20 ppb
	Benzene	7-42 ppb
	Toluene	27-32 ppb
	1,1,1 trichloroethane	3.5 ppb
	Carbon tetrachloride	.11-.12 ppb
	Trichloroethylene	.50-.58 ppb
	Perchloroethylene	8.9-9.2 ppb
	Methane	.17-.84%

15. Based on the findings in paragraph 14, seventeen (17) homes presently remain evacuated.

16. Vinyl chloride, Benzene, Toluene, Chloroform, 1,1,1-trichloroethane, Carbon tetrachloride, and Trichloroethylene are hazardous substances as defined in §101(14) of CERCLA.

17. Endangerment.

A. Population at Risk.

The population within approximately a one-mile radius from the center of the BKK Facility is estimated at 30-40,000 people. Residential development lies adjacent to the BKK Facility on the southern side of the landfill; there is some commerical development in that area as well. The nearest residences are adjacent to the landfill.

B. Exposure Pathway.

As of July 20, 1984, the contaminants addressed by this Order have been found as gases present in air and soil in and/or around nineteen homes adjacent to the BKK Facility. Gases present in soil will migrate from the soil into the air. Exposure to air contaminants results as people breath the air in and around any homes or businesses where the contaminants are present.

C. Health Effects.

(1) Methane: Methane has been detected in air samples taken from inside homes located adjacent to Respondent's facility. Methane is an asphyxiant gas which acts by excluding oxygen from the lungs. When levels of methane reaches a concentration of 50% or greater in air, marked symptoms can be produced. A concentration of 75% or greater is fatal within

minutes. Symptoms include emotional instability, nausea, vomiting, prostration, and loss of consiousness.

In addition, the lower explosive limit of methane is 5-15%. The lower explosive limit is defined as the lowest percent by volume of a mixture or explosive gases which will propagate a flame in air at 25°C and atmospheric pressure. 40 CFR §257.3-8(e)(5).

(2) Vinyl Chloride: Vinyl Chloride has been detected in both community air samples taken near the site and in air samples taken from inside homes located adjacent to Respondent's facility. When inhaled, vinyl chloride is rapidly absorbed through the lungs and enters the blood stream.

Occupational exposure studies have strongly implicated vinyl chloride as a human chemical carcinogen, manifesting itself in multiple tumor sites including the liver, brain and lungs. Other human health effects associated with chronic exposure include functional disturbances of the central nervous system, liver malfunction, and pulmonary insufficiency with restrictive changes in the lungs.

Studies have shown that vinyl chloride causes cancer in laboratory animals exposed to the substance by the inhalation route. The diseases manifested include angiosarcoma, sarcoma, and carcinomas in the liver and lungs.

In addition, studies indicate that low level exposure to vinyl chloride causes a number of congenital malfunctions in humans, including malformation of the central nervous system, upper alimentary tract and genital organs.

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Finally, the California Department of Health Services and the California Air Resources Board utilize a standard of 10 parts per billion (ppb) Vinyl Chloride, based on a 24 hour exposure period, for the ambient air quality standard. Levels measured inside homes in the sampling to date have been as high as 99 times this standard.

In adopting such a level, the comments incorporated in the regulation provide:

> Low-level effects are undefined, but are potentially serious. Level is not a threshold level and does not necessarily protect against harm. Level specified is lowest level at which violation can be reliably detected by the method specified. Ambient concentrations at or above the standard constitute an endangerment to the health of the public.

California Administrative Code, Title 17, Part III, Section 70200.5. (Emphasis added)

(3) Benzene, Toluene, Chloroform, 1,1,1 Trichloroethane, Carbon Tetrachloride, Trichloroethylene, and Perchloroethylene.

There may be cumulative effects of all of these substances, thus, the health effects of each of these substances should be considered.

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(a) Benzene. Benzene has been detected in samples taken in homes near the facility. Benzene acts as a narcotic on the central nervous system. Acute benzene poisoning commences with nausea, vomiting, ataxia, and excitement, followed by depression and coma. Death can occur because of respiratory or cardiac failure. Exposure can cause confusion, dizziness, fatigue, headache, nausea, and coma. There appears to be a correlation between benzene exposure and leukemia in humans.

(b) Toluene. Toluene has been detected in air samples taken in homes near the facility. Inhalation of toluene vapors may produce irritation of the upper respiratory tract, disturbance of vision, dizziness, nausea, collapse, and coma. Direct contact with skin and eyes causes burning. Exposure may cause headache, nausea, loss of appetite, lassitude, and impairment of coordination and reaction time. Higher concentrations may cause anemia, leucopenia and enlargement of the liver.

(c) Chloroform. Chloroform has been detected in air samples taken in homes near the Facility. Prolonged inhalation of chloroform will bring on paralysis accompanied by cardiac respiratory failure and finally death. Its use as an anesthetic has been abandoned due to its toxic effects. Inhalation of the concentrated chloroform vapor results in irritation of the mucous surfaces exposed to it. The narcosis is ordinarily preceded by a stage of excitation which is followed by loss of reflexes, sensation, and consciousness.

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has been detected in air samples taken in homes near the Facility. This substance causes a proarrhythmic activity which sensitizes the heart to epinephrine-induced arrhythmias. This sometimes will cause a cardiac arrest particularly when this material is massively inhaled as in drug abuse for euphoria.

(e) Carbon tetrachloride. Carbon tetrachloride has been detected in air samples taken in homes near the Facility. Carbon tetrachloride has a narcotic action resembling that of chloroform. Exposure to lower concentrations, insufficient to produce unconsciousness, usually results in severe gastrointestinal upset, and may progress to serious kidney and hepatic damage. Though the common form of poisoning following industrial exposure is usually one of gastrointestinal upset, which may be followed by renal damage, other cases have been reported in which the central nervous system has been affected. Prolonged exposure to small amounts of carbon tetrachloride has also been reported as causing cirrhosis of the liver.

(f) Trichloroethylene. Inhalation of high concentrations of trichloroethylene may cause narcosis and anesthesia. Prolonged inhalation of moderate concentrations causes headache and drowsiness. Acute exposure have been attributed to ventriculary dibrillation resulting in cardiac failure.

(g) Perchloroethylene. Toxic by inhalation, prolonged or repeated contact with the skin or mucous membrane, or when ingested by mouth. The liquid can cause injuries to the eyes. The symptoms of acute intoxication from this material are the result of its effects upon the nervous system.

Exposure may cause irritation, lachrymation and burning the eyes and irritation of the nose and throat. There may be vomiting, nausea, drowsiness, and an appearance resembling alcoholic intoxication. The material also acts as an anesthetic, through the inhalation of excessive amounts within a short time.

The material can cause dermatitis, particularly after repeated or prolonged contact with the skin. The dermatitis is preceded by a reddening and burning and more rarely, a blistering of the skin. Upon ingestion it causes iritation of the gastrointestinal tract, which, in turn, causes nausea, vomitting, diarrhea and bloody stools.

CONCLUSIONS OF LAW

1. The BKK facility is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. 9601(9).

2. Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. 9601(21).

3. Wastes disposed of at the site by Respondent include "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. 9601(14).

4. The past, present, and potential migration of hazardous substances from the facility into the air constitutes an actual and threatened "release" as defined in Section 101(22) of CERCLA, 42 U.S.C. 9061(22).

5. Respondent is a responsible party pursuant to §107(a)(1) of CERCLA, because it is the present owner and operator of the Facility and was the owner and operator of the Facility during the disposal of wastes at the Facility.

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6. The Respondent is liable for undertaking the response actions required by this Order.

DETERMINATIONS

Based upon the foregoing FINDINGS OF FACT and CONCLUSIONS OF LAW, EPA has determined that:

1. The actual and threatened release of hazardous substances from the facility may present an imminent and substantial endangerment to the public health, welfare, and the environment.

2. The response actions required by this Order are necessary to protect public health and welfare and the environment and the initiation of such actions will prevent or mitigate immediate significant risk of harm to human life or health or to the environment.

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ORDER

1. Immediate Landfill Gas Migration Control System. Within three (3) days of receipt of this Order, Respondent shall have completed installation and shall commence operation of a landfill gas migration control system to immediately prevent migration of landfill gas from Respondent's Facility in the south central portion of the Facility in the vicinity of Barrier 2. Within two (2) days of receipt of this Order, Respondent shall submit a detailed written description of the gas migration control system required by this paragraph. The gas migration control system shall be designed and operated so as to prevent all methane and any other gases whose source is Respondent's landfill ("landfill gases") from migrating off-site. The gas migration control system shall include the adequate destruction of all gases. Respondent shall have the burden of demonstrating compliance with this requirement.

2. Off-site Mitigation Measures. Mitigation measures shall also be immediately instituted so as to reduce the level of any landfill gases which may have already migrated off-site, or into residences and other structures in the vicinity of Respondent's Facility, to levels which are neither explosive nor an endangerment to human health, whichever is lower. Within five (5) days of receipt of this Order, Respondent shall submit a written description of these mitigation measures together with a timetable for their implementation. Respondent shall have the burden of demonstrating compliance with this requirement.

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3. Permanent Gas Migration Control System. Within forty-five (45) days of receipt of this Order, Respondent shall have completed installation and shall commence operation of a permanent gas mitigation control system capable of preventing the migration of any landfill gases from all portions of Respondent's Facility and adequately destroying all gases. Within fifteen (15) days of receipt of this Order, Respondent shall submit a detailed written description of such permanent gas migration control system.

4. Monitoring.

Respondent shall immediately implement a monitoring program. At a minimum, this program shall include:

(1) Monitoring probes.

a. within 14 days of the receipt of this Order, installation of monitoring probes shall be installed meeting the following specifications:

(1) Monitoring probes are to be located at points approximately midway between each pair of adjacent landfill gas migration control wells.

(2) At each location, multiple depth probes shall be installed. At a minimum, monitoring probes shall be installed at the following depths:

(i) One probe shall be located five (5) feet below the ground surface.

(ii) One probe shall be located at an elevation equivalent to the lowest elevation of the refuse deposited within 500 feet of the probe.

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(iii) One probe shall be located at an elevation of one-half the depth determined in item (ii) above.

(iv) One probe shall be located at an elevation of 1-1/2 times the depth determined in item (ii) above.

(v) Additional probes may be required as indicated by different soil types.

(3) In the event that a saturated zone is encountered in the drilling of these probes, data shall be gathered to determine the upper and lower limits of each such zone. If any of the probe depths determined above are within a saturated portion of the soil, probes will instead be installed 5 feet above and 10 feet below the limits of the saturated portion. These probes are to be designed such that any water which has run down the borehole can be removed prior to sampling.

(4) Clean gravel backfill shall be placed around each probe. This backfill shall extend from a minimum of 6 inches below to 1 foot above the probe.

(5) Seals between the probes at different depths shall be a minimum of 5 feet in length.

(6) Upon completion of the probes, field testing shall be conducted to demonstrate the effectiveness of the seals between probes.

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(7) Bore holes shall be logged by a registered geologist or engineering geologist. As-built installation data showing the location of the probes and seals, and materials used, shall be included on the logs. Boring logs for all probe holes shall be prepared and submitted to EPA.

b. Immediately upon installation of each monitoring probe, daily monitoring shall be initiated at that location. This monitoring shall include measurement of the following parameters at each probe:

- Static pressure in the probe at each depth.
- Methane concentrations and the concentrations of any other constituents as deemed necessary by EPA.

Monitoring shall also include measurement of the following parameters at each well head:

- Gas flow rate.
- Static pressure at each well head and static pressure in the main header at each well head.
- Methane concentrations at each extraction well and any other parameters deemed necessary by EPA.

c. Any monitoring data which indicates that the system is not functioning as required shall be submitted to EPA immediately. All other monitoring data shall be submitted in accordance with paragraph 8.

(2) Monitoring in and around Respondent's facility. Respondent shall immediately implement monitoring in and around the Facility including into residences and other structures located in the vicinity of Respondent's facility.

This monitoring shall consist of testing for any gas or gaseous constituent, the source of which may be Respondent's Facility. The gas or gaseous constituents to be monitored for shall include vinyl chloride, benzene, toluene and methane. This program shall immediately address the area described in paragraph 1, above, but shall also extend to other areas surrounding Respondent's Facility in order to identify other routes, if any, where landfill gases may have migrated or be migrating from Respondent's Facility; and

(3) Source testing of gas flares. Respondent shall conduct source testing of all gas flares to quantify the destruction efficiency level of all gases specified above in paragraph (2). In addition, identification of all detectable gases and full characterizaion and quantification of the gases released in the 10 highest concentrations. This testing shall initially be conducted within 30 days from the date of receipt of this Order and once a quarter thereafter. This data shall be submitted to EPA in accordance with paragraph 8.

Upon request, Respondent shall provide EPA with split samples of any samples collected on or off Respondent's Facility pursuant to this paragraph.

Within five (5) days of receipt of this Order, Respondent shall submit a written description of the monitoring program called for herein. The description shall specify the parameters to be monitored, sampling and analytical procedures, descriptions

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of monitoring instruments, and the frequency and locations of monitoring.

5. Temporary Relocation. Respondent shall immediately provide, at Respondent's expense, suitable accomodations for every family or person who has been ordered or urged by the City of West Covina ("City"), the State of California ("State"), or any department, agency, or branch of the City, State, or federal government to evacuate or otherwise temporarily leave their homes because of endangerment to persons and/or structures caused by Respondent's landfill gases, during such period of time that such persons or families are prohibited from or advised against returning to their home by any such governmental entity. "Suitable accomodations" means, at a minimum, safe, clean, habitable premises suitable for occupation by a family of the size which shall be occupying them. Respondent shall (1) locate and arrange for occupation of such accomodations, (2) provide for moving necessary personal belongings, including pets, into such accomodations, (3) provide for returning residents and belongings to evacuated homes, and (4) prevent against losses of any personal property suffered as a result of such evacuation or temporary abandonment of a residence.

6. Reimbursement of Costs. BKK shall immediately implement a program to reimburse any relocation expenses incurred by any person or family who has been ordered or urged to evacuate or temporarily leave their homes pursuant to the advice of any entity described in paragraph 5, above, because of the presence of Respondent's landfill gases in or around such homes. Within ten (10) days of receipt of this Order, Respondent shall submit

a written description of its program for carrying out such reimbursement. This program shall establish a method for Respondent's prompt payment (within 24 hours of claims) of or reimbursement for those expenses, including a provision for reimbursement of any public entity (including, but not limited to, the City) or private agency which has provided money, goods or services, including security services, to persons who have evacuated or abandoned their residences pursuant to the order or advice of any entity described in paragraph 5, above, because of the presence of Respondent's landfill gases in or around such homes.

For purposes of this paragraph, a person's or family's length of stay away from home shall be determined by when the public entity which ordered or advised abandonment of the home allows each person or family to return home, or no longer recommends against such return, or longer if there are special circumstances which may necessitate a person or family staying away longer (e.g. damage to home renders it uninhabitable; physician's certificate shows that family member(s) must stay away longer for health reasons).

7. Modifications. The written descriptions submitted by Respondent pursuant to paragraphs 1, 2, 3, 4, and 6 are subject to review by EPA, which shall consult with appropriate State and/or local agencies in conducting its review. EPA may order modification of the gas migration control systems described by Respondent pursuant to paragraphs 1, 2, and 3, the monitoring system described by Respondent pursuant to paragraph 4, and the reimbursement program to be submitted by Respondent pursuant to

paragraph 6 or make such other modifications as EPA may deem necessary to protect public health and welfare and/or the environment. Such modifications may be issued as amendments to this Order and shall be effective upon issuance.

8. Reporting. Respondent shall weekly provide EPA with written results of the monitoring activities carried out pursuant to Paragraph 4 of this Order, commencing one week after receipt of this Order. Respondent shall provide written progress reports to EPA, due on the fifth day of each month after the effective date of this Order, describing all activities undertaken pursuant to the Order in the previous month, and activities planned for the current and next coming months.

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9. Compliance with Applicable Laws. Respondent shall carry out this Order in compliance with all local, State, (including the ISD and any modifications to the ISD), and federal requirements, including requirements to obtain necessary permits and to assure worker safety. Gases collected by the Respondent's gas migration control system shall be destroyed in accordance with the requirements of the SCAQMD. Condensate produced from the gas migration control system shall be stored, treated and/or disposed of in accordance with State and local requirements. Any such requirements may be more stringent than those imposed pursuant to this order.

10. Project Coordinators. Within two (2) days of the effective date of this Order, Respondent shall designate, and provide EPA with the name and address of a Project Coordinator whose responsibilities will be to receive all notices, comments, approvals and other communications from EPA to Respondent.

11. Endangerment During Implementation. In the event that the Regional Administrator of EPA, Region 9, determines that any activities (whether pursued in implementation of or in noncompliance with this Order) or circumstances are creating an imminent and substantial endangerment to the health and welfare of people on the site or in the surrounding area or to the environment, the Regional Administrator of EPA, Region 9, may order Respondent to stop further implementation of this Order for such period of time as needed to abate the endangerment.

12. Incorporation of Documents. Any reports, plans, specifications, schedules and other documents required by the

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terms of this Order are, upon written approval by EPA, incorporated as a part of this Order.

13. Enforcement. Violation by the Respondent of this Order through failure to comply with any provision herein or otherwise shall be enforceable pursuant to Sections 106(b) and 113(b) of CERCLA, 42 U.S.C. 9606(b) and 9613(b).

12. Penalties for Noncompliance. Failure to comply may also subject Respondent to civil penalties and/or punitive damages in an amount up to three times the amount of any costs incurred by the United States as a result of such failure, as provided in Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. 9606(b) and 9607(c)(3). Nothing herein shall preclude EPA from taking such other actions as may be necessary to protect the public health and welfare or the environment and recovering the costs thereof.

13. Liability. Nothing herein shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current or future operations at the facility. Notwithstanding compliance with the terms of this Order, Respondents may be required to take further actions as are necessary to protect public health or welfare or the environemnt.

14. Performance. All response work performed pursuant to this Order shall be under the direction and supervision of a qualified professional engineer and/or certified geologist with

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expertise and experience in landfill gas collection, combustion and monitoring. Respondent shall, within three (3) days of receipt of this Order, provide EPA with the name(s) of such engineer(s) or geologist(s) and of any contractors and subcontractors to be used in carrying out the terms of this Order.

17. Quality Assurance. Respondent shall use quality assurance, quality control, and chain-of-custody procedures in accordance with EPA Guidance Document QAMS-005/80 throughout all activities. Respondent shall consult with EPA in planning for sampling and analysis. Respondent shall provide quality control reports to EPA and California Department of Health Services certifying that all activities have been performed, in accordance with paragraph 8 above.

18. Site Access. Access to the site shall be provided at all reasonable times to employees, contractors and consultants of EPA, California Department of Health Services, South Coast Air Quality Management District, Regional Water Quality Control Board, and California Waste Management Board and its designated local enforcement agency. Nothing in this paragraph is intended to limit in any way the right of entry or inspection that any such agency may otherwise have by operation of any law.

19. Government Liabilities. The United States shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by the Respondents, its employees, agents or contractors in carrying out activities pursuant to this Order, nor shall the Federal Government be held as a party to any contract entered into by the Respondent or its agents in carrying out activities pursuant to this Order.

20. Notice of Intent to Comply. Respondent shall inform EPA, in writing, within two (2) days after the effective date of this Order, of its intent to comply with the terms of the Order.

21. Notifications. All submittals and notifications to EPA pursuant to this Order shall be made to:

Director, Toxics and Waste Management Division
Environmental Protection Agency, Region 9
215 Fremont Street
San Francisco, CA 94105
Attn: Karen Schwinn (T-2-1)

Copies of all submittals and notifications shall be sent simultaneously to:

Angelo Bellomo
Toxic Substances Control Division
California Department of Health Services
107 S. Broadway, Room 7128
Los Angeles, CA 90012

Robert Ghirelli
Regional Water Quality Control Board
Los Angeles Region
107 South Broadway, Room 4027
Los Angeles, CA 90012

Charles Coffee
County of Los Angeles
Department of Health Services
313 North Figueroa Street
Los Angeles, California 90012

Ben Shaw
South Coast Air Quality Management District
9150 E. Fair Drive
El Monte, CA 91731

William Dennison
South Coast Air Quality Management District
Engineering Division
9150 E. Fair Drive
El Monte, CA 91731

Mike Miller
Environmental Services Director
City of West Covina
1444 West Garvey Avenue
West Covina, CA 91790

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All approvals and decisions of EPA made regarding such submittals and notifications shall be communicated to Respondent by the Director, Toxics and Waste Management Division, U.S. Environmental Protection Agency, Region 9. No informal advice, guidance, suggestions or comments by EPA regarding reports, plans specifications, schedules or any other writing submitted by Respondent shall be construed to relieve Respondent of its obligation to obtain such formal approvals as may be required herein.

22. On-Scene Coordinator. EPA shall appoint an On-Site Coordinator (OSC) who shall have authority to be on-site at all times when response work is being undertaken pursuant to this Order. The OSC shall have at least the authority to: (1) take samples or direct the type, quantity and location of samples to be taken by Respondents; (2) direct that the work in response to this Order stop for a period not to exceed 72 hours whenever the OSC determines that activities at the site may create an immediate and significant threat to public health or welfare or the environment; (3) observe, take photographs and make such other reports on the progress of the work as the OSC deems appropriate; (4) review records, files and documents relevant to the Order; and (5) to make or authorize minor field modifications in the studies, techniques, procedures or design utilized in carrying out this Order which are necessary to the completion of the project. The absence of the OSC from the site shall not be cause for stoppage of work. The OSC shall have the same authority as that vested in the "On-Scene Coordinator" by 40 CFR §300 *et seq.*, published at 42 Fed. Reg. 31180 (July 16, 1982).

PARTIES BOUND

This Order shall apply to and be binding upon the Respondent, its officers, directors, agents employees, contractors, successors, and assigns.

EFFECTIVE DATE

This Order is effective upon receipt by Respondent, notwithstanding any conferences requested pursuant to Respondent's opportunity to confer, and all times for performance or response activities shall be calculated from that date.

SEVERABILITY

The requirements of this Order are severable, and Respondent shall comply with each and every provision hereof notwithstanding the effectiveness of any other provision.

OPPORTUNITY TO CONFER

Respondent may request, within three (3) days after receipt of this Order, a conference with EPA to be held within seven (7) days of the date of issuance to discuss this Order, including its applicability, the factual determinations upon which the Order is based, the appropriateness of any actions which the Respondents are ordered to take, or any other relevant and material issues or contentions which Respondent may have regarding this Order. Such request may be made by telephone, to be followed by written confirmation. Respondent may also request an initial telephone conference to be held within five (5) days after receipt of this order to discuss the above-referenced issues. Respondent may appear in person or by an

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attorney or other representative at any conference held at its request. Any request for a conference should be made to:

Ann S. Nutt
Assistant Regional Counsel
EPA, Region 9
215 Fremont Street
San Francisco, CA 94105
(415) 974-8045

Date of Issuance: 07/21/84 By: Judith E. Ayres
Judith E. Ayres
Regional Administrator
U.S. Environmental Protection Agency
Region 9
215 Fremont Street
San Francisco, CA 94105

RECORDED AT THE REQUEST OF
AND WHEN RECORDED, RETURN TO:
BKK CORPORATION
2550 237th Street
Torrance, California 90510

NOTICE

Pursuant to the requirements of 40 CFR Part 265, Subpart G, Section 265.120 as revised January 12, 1981, Notice is hereby given that the property described herein is subject to the following conditions.

(1) A portion of the land has been used to manage hazardous waste, and
(2) Use of the land upon or in which hazardous wastes have been placed is restricted under Section 265.117 (c) of 40 CFR Part 265. Subpart G, under the authority of Sections 3004 and 3005 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 9176, as amended.

Legal Description: That portion of the Rancho La Puente in the City of West Covina, County of Los Angeles, State of California, containing an area of 583.171 acres, more or less known as Lot 3 as shown on Record of Survey recorded in Book 85, Pages 10 through 12 inclusive, on file in the Office of the County Recorded of said County, described as follows:

Beginning at the southeasterly terminus of that certain course in the boundary of said Lot 3, shown as having a bearing North 55° 00' 45" West and a length of 1911.13 feet, on said Record of Survey, said certain course having a bearing of North 9° 16" 48" West 1244.18 feet to the True Point of Beginning, thence along the following courses and distance:

North 33° 44' 32" East 186.39 feet; South 50° 54' 22" East 214.84 feet;
North 73° 04' 21" East 240.42 feet; North 2° 29' 22" West 460.43 feet;
North 33° 41' 21" East 649.00 feet; North 49° 14' 11" East 382.88 feet;
North 59° 55' 53" East 439.09 feet; South 73° 18" 03" East 208.81 feet;
North 75° 10' 25" East 351.71 feet; North 84° 38' 39" East 642.81 feet;
South 15° 31' 27" West 186.82 feet; South 26° 33' 54" East 201.25 feet;
North 66° 30' 05" East 501.60 feet; South 36° 52' 12" East 100.00 feet;
South 57° 31' 44" East 130.38 feet; South 21° 48' 05" East 161.55 feet;
South 77° 00' 19" East 133.42 feet; South 12° 12' 02" East 378.55 feet;
South 60° 15' 18" East 161.25 feet; North 83° 09' 26" East 251.79 feet;
North 60° 31' 27" East 264.20 feet; South 7° 23' 10" East 544.52 feet;
South 60° 29' 57" West1746.42 feet; South 28° 14' 15" West 612.94 feet;
North 86° 03' 17" West 290.69 feet; North 36° 09' 29" West 322.02 feet;
North 72° 53' 50" West 272.03 feet; South 75° 57' 50" West 346.34 feet;
South 88° 20' 52: West 312.13 feet; North 47° 08' 35" West 548.39 feet;
North 55° 22' 33" West 510.39 feet; North 29° 44' 42" West 161.80 feet;
more or less, to the True Point of Beginning.

Address: 2210 South Azusa Avenue, West Covina, California.

ATTACHMENT 1

Dr. **Simpson**. Were those chemicals found outdoors or indoors?

Mr. **Seraydarian**. Both. I think the range included the outdoor and the indoor samples.

Dr. **Simpson**. OK. Do you think that a program which monitored only outdoor air, say, at the flares or even beyond the flares, but did not monitor air indoors, be sufficient to protect human health, since people spend 75 to 90 percent of their time indoors?

Mr. **Seraydarian**. The assumption would be that if you have enough wells, you control the movement of gas off the site. If you control the movement, then you won't find anything indoors or outdoors from the BKK landfill.

Dr. **Simpson**. Do you suppose that the monitoring would be superfluous at that point or would the monitoring then be validation of that supposition?

Mr. **Seraydarian**. I am not sure whether I understand you correctly. If you find a problem, then additional monitoring could either confirm it or conclude that it was incidental and you would still have to maintain a continuous monitoring program.

Dr. **Simpson**. Are there any movements afoot to require indoor monitoring or to have residents volunteer to have their houses monitored?

Mr. **Seraydarian**. To be honest, I don't know whether that is part of the air district's intended sampling. Now, they undertook a massive study about 2 years ago. I think they presented the summary to you at that June 3 hearing.

Dr. **Simpson**. OK. What will be the standard of acceptability for the destruction efficiency of the flares? Do you have a number on that?

Mr. **Seraydarian**. That wouldn't be an EPA number. It would be a State number.

Dr. **Simpson**. Would you be able to provide that?

Mr. **Seraydarian**. I could find out what it would be.

Dr. **Simpson**. OK.

Dr. **Simpson**. OK. You also raised some questions concerning the efficacy of mixing liquid hazardous waste with solid wastes. I would imagine the solids generally decompose, and that produces some of the methane. Where does the liquid hazardous waste go when the solids decompose?

Mr. **Seraydarian**. According to BKK, it stays and the liquid hazardous waste is absorbed by the solid waste and they assume that the leachate from the solid waste is carved from the organic disposal. There has always been the opposite point of view that you are going to have liquids that come back out once the solid material decomposes.

A lot of studies were done in the 1970's because this kind of mixing was done at other sites and they tried to come up with the ideal mixing ratio that would still have the liquids absorbed, even when you had the decomposition. So the minimum that BKK would get away with historically was a 2-to-1 ratio. At one time, at a nearby landfill, that ratio was 5-to-1.

Dr. **Simpson**. Are you satisfied with the 2-to-1 or even 5-to-1 ratio?

Mr. **Seraydarian**. To be honest, I have never assumed that the analysis was scientific enough to conclude one way or the other.

Dr. SIMPSON. OK. You also mentioned that the leachate will, in time, be treated. Do you know the procedure by which that leachate will be treated?

Mr. SERAYDARIAN. The leachate could include organics and heavy metals. If it included both, then they could treat both, but probably separately, so they would have some way of dropping the heavy metals out of solution and then they could go through some type of carbon absorption or aeration, depending on the type of organics and then bring the two streams back together.

Dr. SIMPSON. What will happen to the residues of this leachate treatment process?

Mr. SERAYDARIAN. That will have to go to a "hazardous waste site." Now, if BKK can establish acceptable units at the site that meet all future RCRA requirements, then they could dispose of the waste at the site. If the site is closed down, then it would have to go somewhere else.

Dr. SIMPSON. All right. Thank you very much.

Mr. STENHOLM. Mr. Torres.

Mr. TORRES. Yes. I would like to just follow up. Thank you, Mr. Chairman. We pretty well understand the substance of section 7003, that particular section that authorizes the Administrator to take action. I would like to ask Mr. Thomas: Would you please define how EPA determines, though, when section 7003 should be enforced.

Mr. THOMAS. Well, it is on a site-specific basis. A situation arises and our personnel or State personnel or a combination of the two—that is generally what it is—makes a determination based on both toxicological data as well as exposure data, that there is an imminent and substantial endangerment at a site and an action is taken. It is enforcement authority that we have.

Mr. TORRES. May I stop you on that. Now would you please define for me specifically what you just said, "imminent, substantial endangerment." What does that mean?

Mr. THOMAS. Well, Gene, you may want to get into some of the history.

Mr. TORRES. In the context of 7003.

Mr. LUCERO. There are certain definitions. That standard has been interpreted in a number of cases and there are some rulings within the various opinions that give further definition to the standards. The word "imminent" does not mean immediate; it means inevitable, essentially, that something will occur, either in the near- or medium- or far-term. In the case of "substantial," the word means what its normal usage means, something of—some substance or some significance. Obviously more than a small amount. And then the word "endangerment," basically, is a term used to refer to the danger presented, the risk presented by the particular substance of concern or substances of concern, solid wastes or hazardous wastes, to either the environment, to different components of the environment or to the public health.

What you have to—to make that determination, you may look at a number of different situations to come to that conclusion. You could look at, for example, if there is exposure to drinking water and if the contamination exceeds certain drinking water standards, that may be enough to determine that there is an endangerment. If it involves exposure through an air pathway, and again, exceeds, say, a State standard or an EPA ambient air standard, that may present an endangerment.

Other endangerments of concern can be threats to biota, either animal or plant, in streams, or in some cases, on the surface. You would look to that and other possibilities in determining what the particular endangerment might be. In most cases, to make the conclusion that you have a substantial endangerment, you will look at all of them and it is the sum of the analysis that gives you the conclusion that there is an endangerment.

Mr. **Torres**. And then who makes the determination as to how that order by EPA is enforced?

Mr. **Lucero**. The decision is exercised by a number of different people who have the authority to initiate the action. Right now, the—as Mr. Thomas says, if there is a belief that such a situation may exist, the process can be initiated normally in either a State that has such an authority or in EPA. It can start with individuals, inspectors or investigators who are familiar with the facts at a site. We can make a proposal. In region IX in San Francisco—I am not sure whether Mr. Seraydarian or the regional administrator is the final person to make the decision, but one or the other of them must decide that they wish to issue the order.

The way EPA is currently structured, before that order would be issued under 7003, there would be a headquarters review of the facts that were looked at and the analysis that was made and some concurrence or nonconcurrence would be made before the order finally went out.

So in the final analysis, the specific answer to your question is the regional administrator in San Francisco would make a determination that an order should be issued and my office would concur on nonconcur in that.

Mr. **Torres**. So it is not just at the discretion of the administrator at the Federal level up here.

Mr. **Thomas**. The administrator has delegated those responsibilities to me and the regional administrator.

Mr. **Torres**. I see. Does exposure to vinyl chloride at levels as high as 99 times the environmental standard and exposure to high concentrations of methane gas constitute an imminent and substantial endangerment to my constituents who are living and working near the BKK landfill?

Mr. **Thomas**. The situation did not present—the facts of the situation were not such that we felt a 7003 order was warranted. We felt that the enforcement authorities that we had, as well as the State had, that had been exercised, were sufficient to deal with the situation.

Mr. **Torres**. From what you have told the committee, then, EPA apparently only enforces section 7003 after a landfill meets a very stringent standard and yet the legislative history of this section clearly indicates that section 7003 does not require a stringent test prior to enforcement.

I would like to—well, I want to dispense with that reading, but I simply want to, on the basis of everything we have heard today and what we have discussed here, I simply want to pose a very salient question to you, gentlemen—and perhaps one of you or all of you can answer it—why hasn't EPA exercised, then, its authority to shut down BKK, using either section 7003 of RCRA or section 106 of CRCLA?

Please answer that for me.

Mr. THOMAS. Mr. Torres, we have used section 106. That was the latest order we issued. It was not in the context of shutting down the facility, though. I think that the bottom-line answer to your question is that EPA has not reached a determination that that facility needs to be shut down; that EPA has reached the determination that a number of actions need to be taken at that facility and we have issued orders to require those actions to be taken, all of that coordinated with the State. BKK is taking those actions.

Those actions are both mitigating the emergency situation, as well as dealing with the longer-term issues that we are trying to come to grips with.

Now, in the context of taking those actions, we still may reach the determination that, one, based on additional data, we feel the facility may well need to be closed. We haven't reached that determination at this point.

Mr. TORRES. How long is it going to take? A week? Days? Months? A year?

Mr. THOMAS. Second, the major issue I think you have got to come to grips with is, is the current operation of the facility contributing to the problem that we are dealing with at BKK? The problem we are dealing with at BKK in the latest emergency situation is as a result of past practices at BKK, not current practices. Shutting down BKK would have had no impact, and will have no impact, on those problems we are dealing with. We are going to deal with those problems whether BKK is shut down or not.

So it is that connection between current operation and the problems we are dealing with. Is there a connection?

Mr. TORRES. Well, I think, and based on the numbers of letters that I have received from constituents and various individuals in the community that, in fact, the BKK operation is leading to the current situation and is going to continue to cause problems into the future. That is why we are here to discuss with you exactly what has transpired up to now and we are trying to learn from you why we haven't seen some affirmative action, so to speak, on this particular landfill operation. What I have been advocating as a shutdown is based on the relevant facts that we have heard and been privy to.

I commend you for being here. I commend you for sharing with us what you now know. I am somewhat appalled that the Administrator is not here. I think the urgency of this kind of situation warrants his presence. I can certainly appreciate his comments in the press yesterday and today about the need for EPA to deal with lead in gasoline and that is commendable, too. And I am sure tomorrow, he will be at the White House for the swearing in of Ms. Anne Burford. However, I think he should be here because this is as important, if not more important, than those two other issues. While that is not to cast a disparaging remark regarding the fact that you are here, I think Mr. Ruckelshaus should also be here and I hope that we can hear from him.

Mr. THOMAS. Mr. Torres, I can assure you that Mr. Ruckelshaus is very concerned about this situation. I regret, as does he, that he was not able to be here today. The timing in which the committee was scheduling this hearing presented a major problem to us in just trying to accommodate that. Additionally, as I indicated, I have the authority, as does the regional administrator to deal with the situation at BKK and hoped that I would be able to respond to all of your concerns today. I mean, clearly, as far accountability is concerned, I am the guy that has to take the action, as does the region, one way or the other. If you want to deal with the people who have to do it one way or the other, we are the people. We are here.

Now, the Administrator is the guy who gives me my marching orders and I can tell you the marching orders I got are to carry out that statute, carry out those regulations, make sure that you take the action that is warranted, and if in his opinion, he doesn't think I am doing this, he will be the first one to get rid of me.

I regret he is not here today, but I can assure you that I have his full support to speak for this situation.

Mr. TORRES. Thank you, Mr. Thomas. I appreciate your being here.

Mr. Chairman, I yield back the balance of my time.

Mr. STENHOLM. Are there any additional questions you would like to ask, Mr. Torres? Do you wish to come back? I know I have some additional questions.

Mr. TORRES. Why don't you lead, Mr. Chairman, with the questions. I don't have any at this time.

Mr. STENHOLM. I am trying to determine whether or not you want us to come back?

Mr. TORRES. Oh. Yes, Mr. Chairman, rather than take up more time, because I understand we have a vote on the floor——

Mr. STENHOLM. Yes.

Mr. TORRES. I would simply ask unanimous consent that I submit questions to our witnesses and obtain answers from them for the record at a later point.

Short of that, I would yield back the balance of my time.

Mr. STENHOLM. We do have a vote in about 8 minutes. We will leave the record open for additional questions, and the answers will be included in the record for future reference.

Mr. THOMAS. Thank you, Mr. Chairman. We will be pleased to respond to any questions in writing or any followup interaction that you or your staff would like to have.

Mr. TORRES. Thank you, Mr. Thomas, and the rest of you gentlemen.

Mr. STENHOLM. Thank you all very much.

Stand adjourned.

[Whereupon, at 4 p.m., the subcommittee adjourned, to reconvene subject to call of the Chair.]

APPENDIX

APPENDIX A.—SELF-EXPLANATORY RESPONSES FROM EPA TO QUESTIONS RAISED AT THE HEARING

United States
Environmental Protection
Agency

Regional Administrator
215 Fremont Street
San Francisco CA 94105

Region 9
Arizona, California
Hawaii, Nevada
Pacific Islands

EPA

September 6, 1984

Honorable Charles W. Stenholm
Chairman, Subcommittee Energy, Environment
and Safety Issues Affecting Small Business
U.S. House of Representatives
1232 Longworth Building
Washington, D.C. 20515

Dear Chairman Stenholm:

At your July 31, 1984 hearing the Subcommittee requested further information concerning the BKK Landfill located in West Covina, California. Your request consisted of a series of questions for which we have prepared the attached response.

I hope that our response addresses the concerns of the Subcommittee. If we may be of further assistance please call me or have your staff call Deanna Wieman, Director, Office of External Affairs at (415) 974-8088.

Sincerely,

John Wise

for Judith E. Ayres
Regional Administrator

Attachments (2)

cc: Honorable Esteban E. Torres (Without Attachment 2)

Attachment

1. Did EPA approve the specific placement of the gas collection systems wells?

   No. The placement of the gas collection wells was determined by the California Solid Waste Management Board and BKK. The Solid Waste Management Board is the State agency with the greatest expertise on landfill gas.

2. Did EPA monitor the installation of the gas collection system?

   EPA did observe some facets of the installation, but the primary agency monitoring the installation was the Solid Waste Management Board.

3. Has EPA monitored the operation of the gas collection system?

   Again, the principal monitoring has been by the Solid Waste Management Board. However, EPA is reviewing the data periodically to insure that the EPA enforcement orders are complied with. The new gas collection system has resulted in dramatic improvement in the ambient and subsurface probe readings. A final decision on the effectiveness of the system will not be made, however, for several months until substantially more data is available.

4. On July 21, 1984, EPA ordered BKK to install a permanent gas collection system after 45 days. What type of system will be implemented?

   The system will be an extension of the current one. Gas collection wells will be drilled on the perimeter and interior of the fill. The wells will be connected and a vacuum applied to carry the gas to a flare to be burned.

5. Does EPA plan to continue to monitor the air quality inside the homes of those evacuated?

   Yes. A minimum of 2 samples per week will be collected for three weeks and analyzed for potentially hazardous chemicals.

6. Do you believe a health effects study should be conducted at the BKK Landfill?

   Yes. The State Department of Health Services, EPA and the Center for Disease Control (CDC) are currently working on the design of a health risk assessment based upon the results of an air monitoring program which will be conducted in the next several months in the vicinity of the BKK Landfill.

7. When does EPA expect BKK to complete a full hydro-geologic characterization of the landfill?

The available data will be summarized by BKK in mid-September. However, it is unlikely that the characterization prepared at that time will be sufficient to allow design of remedial work. A complete characterization will take several more months.

8. Please submit all data resulting from both ambient and indoor air quality tests.

The data requested is attached.

9. What hazardous waste disposal facilities would be available in the event that the BKK facility is closed?

There are a number of alternatives available depending on the type of waste. Certain waste streams can be recycled at this time. For others disposal at one of the other sites such as Casmalia or Kettleman Hills (Chemical Waste Management, Inc.) will be required.

2322 Lynn	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	6.68 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5%
carbon dioxide	417 ppm		5000000
non-methane hydrocarbons	4.9 ppm		no std
Vinyl Chloride	<2/990	0-3 ppb	1000
Methyl Chloride	1.7	0-3.8 ppb	50000
Freon-12	1.8	0-50 ppb	no std
Methylene Chloride	1.0	0-6.3 ppb	100000
Freon-11	0.9	0-1.8 ppb	no std
Vinylidene Chloride	0.3	0-0.3 ppb	10000
Chloroform	0.2	0-3 ppb	10000
Freon-113	0.4	0-4.5 ppb	1000000
Dichloroethylene	<0.1	0-1 ppb	200000
1,1,1 Trichloroethane	1.7	0-9.7 ppb	350000
Carbon Tetrachloride	0.1	0-0.15 ppb	5000
Trichloroethylene	0.6	0-1.5 ppb	25000
Ethylenedibromide	<0.01	0-0.18 ppb	130
Perchloroethylene	2.9	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	12		100000

2328 Lynn	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	6.04 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	421 ppm		5000000
non-methane hydrocarbons	5.1 ppm		no std
Vinyl Chloride	<2/42	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	1.7	0-50 ppb	no std
Methylene Chloride	4.9	0-6.3 ppb	100000
Freon-11	0.7	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	1.4	0-3 ppb	10000
Freon-113	0.4	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	1.5	0-9.7 ppb	350000
Carbon Tetrachloride	0.3	0-0.15 ppb	5000
Trichloroethylene	0.04	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	2.3	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	11		100000

2334 Lynn	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	7.05 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	483 ppm		5000000
non-methane hydrocarbons	5.0 ppm		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	0.8	0-50 ppb	no std
Methylene Chloride	3.9	0-6.3 ppb	100000
Freon-11	1.7	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	0.2	0-3 ppb	10000
Freon-113	0.4	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	1.3	0-9.7 ppb	350000
Carbon Tetrachloride	0.06	0-0.15 ppb	5000
Trichloroethylene	0.1	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	1.5	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	18		100000

2338 Lynn	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	4.71 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	-		5000000
non-methane hydrocarbons	-		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	<7.5	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-9.7 ppb	200000
1,1,1 Trichloroethane	5.4	0-0.15 ppb	350000
Carbon Tetrachloride	<0.90	0-1.5 ppb	5000
Trichloroethylene	<6.0	0-0.18 ppb	25000
Ethylenedibromide	-	0-6.3 ppb	130
Perchloroethylene	4.5	0-16 ppb	50000
Benzene	<5		10000
Toluene	9		100000

2342 Lynn	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	5.79 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	-		5000000
non-methane hydrocarbons	-		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	<7.5	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloro-ethane	5.1	0-9.7 ppb	350000
Carbon Tetrachloride	<0.90	0-0.15 ppb	5000
Trichloroethylene	<6.0	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	3.9	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	10		100000

2346 Lynn	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	7.05 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5%
carbon dioxide	-		5000000
non-methane hydrocarbons	-		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	<7.5	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	5.3	0-9.7 ppb	350000
Carbon Tetrachloride	<0.90	0-0.15 ppb	5000
Trichloroethylene	<6.0	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	4.2	0-6.3 ppb	50000
Benzene	<5	0-16	10000
Toluene	11		100000

2352 Lynn	ppb(unless stated) concentration	range IA Basin	Ca OSHA Std ppb
Methane	5.33 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5%
carbon dioxide	-		5000000
non-methane hydrocarbons	-		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	<7.5	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	9.6	0-9.7 ppb	350000
Carbon Tetrachloride	<0.90	0-0.15 ppb	5000
Trichloroethylene	<6.0	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	4.6	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	10		100000

2023 Nanette	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	6.50 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	-		5000000
non-methane hydrocarbons	-		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	<7.5	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloro-ethane	4.6	0-9.7 ppb	350000
Carbon Tetrachloride	<0.90	0-0.15 ppb	5000
Trichloroethylene	<6.0	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	3.2	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	9		100000

2029 Nanette	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	8.26 ppm	1.5 - 10 ppm	oxygen must be less than 19.5 %
carbon dioxide	-		5000000
non-methane hydrocarbons	-		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	<7.5	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	5.4	0-9.7 ppb	350000
Carbon Tetrachloride	<0.90	0-0.15 ppb	5000
Trichloroethylene	<6.0	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	4.10	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	9		100000

2032 Nanette	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	5.31 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	389 ppm		5000000
non-methane hydrocarbons	4.2 ppm		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	-	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	-	0-9.7 ppb	350000
Carbon Tetrachloride	-	0-0.15 ppb	5000
Trichloroethylene	-	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	-	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	9		100000

2035 Nanette	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	9.12 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	403 ppm		5000000
non-methane hydrocarbons	5.1 ppm		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	2.2	0-50 ppb	no std
Methylene Chloride	5.3	0-6.3 ppb	100000
Freon-11	3.1	0-1.8 ppb	no std
Vinylidene Chloride	0.2	0-0.3 ppb	10000
Chloroform	0.4	0-3 ppb	10000
Freon-113	1.0	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	1.8	0-9.7 ppb	350000
Carbon Tetrachloride	0.1	0-0.15 ppb	5000
Trichloroethylene	0.5	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	1.7	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	9		100000

2038 Nanette	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	6.83 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	494 ppm		5000000
non-methane hydrocarbons	3.1 ppm		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	-	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	-	0-9.7 ppb	350000
Carbon Tetrachloride	-	0-0.15 ppb	5000
Trichloroethylene	-	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	-	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	9		100000

2041 Nanette	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	8.32 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	471 ppm		5000000
non-methane hydrocarbons	5.6 ppm		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	<7.5	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	5.9	0-9.7 ppb	350000
Carbon Tetrachloride	<0.90	0-0.15 ppb	5000
Trichloroethylene	<6.0	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	4.5	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	10		100000

2044 Nanette	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	6.27 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	453 ppm		5000000
non-methane hydrocarbon	4.8 ppm		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	-	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	-	0-9.7 ppb	350000
Carbon Tetrachloride	-	0-0.15 ppb	5000
Trichloroethylene	-	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130000
Perchloroethylene	-	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	9		100000

2401 Leanna	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	6.31 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	400 ppm		5000000
non-methane hydrocarbons	3.7 ppm		no std
Vinyl Chloride	<2/20	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	-	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	-	0-9.7 ppb	350000
Carbon Tetrachloride	-	0-0.15 ppb	5000
Trichloroethylene	-	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	-	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	8		100000

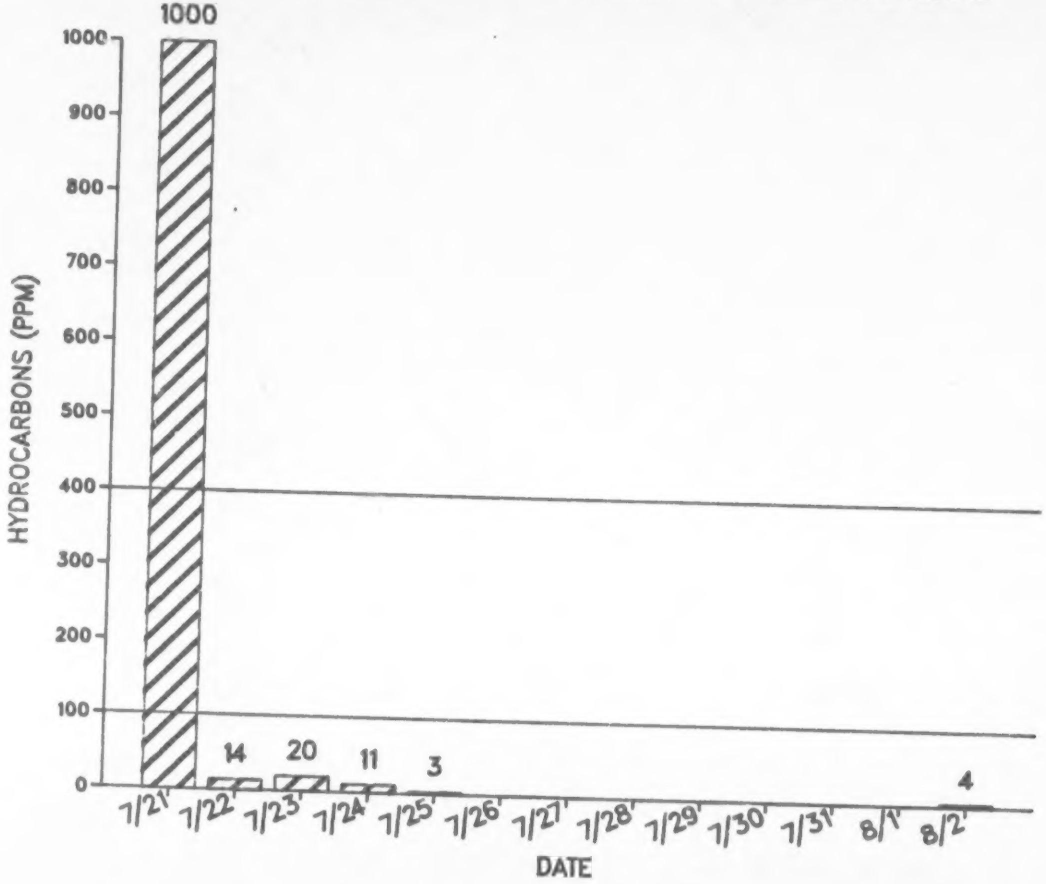
2405 Leanna	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	7.42 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	402 ppm		5000000
non-methane hydrocarbons	5.0 ppm		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	<7	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	56.6	0-9.7 ppb	350000
Carbon Tetrachloride	<0.9	0-0.15 ppb	5000
Trichloroethylene	<6.0	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	4.65	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	11		100000

2409 Leanna	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	6.64 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	654 ppm		5000000
non-methane hydrocarbons	5.7 ppm		no std
Vinyl Chloride	<2	0-3 ppb	1000
Methyl Chloride	-	0-3.8 ppb	50000
Freon-12	-	0-50 ppb	no std
Methylene Chloride	-	0-6.3 ppb	100000
Freon-11	-	0-1.8 ppb	no std
Vinylidene Chloride	-	0-0.3 ppb	10000
Chloroform	18	0-3 ppb	10000
Freon-113	-	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	4.9	0-9.7 ppb	350000
Carbon Tetrachloride	2.7	0-0.15 ppb	5000
Trichloroethylene	<6.0	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	4.6	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	9		100000

2711 Miranda	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	16.2 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	463 ppm		5000000
non-methane hydrocarbons	6.2 ppm		no std
Vinyl Chloride	5	0-3 ppb	1000
Methyl Chloride	2.3	0-3.8 ppb	50000
Freon-12	1.1	0-50 ppb	no std
Methylene Chloride	16	0-6.3 ppb	100000
Freon-11	2.6	0-1.8 ppb	no std
Vinylidene Chloride	0.7	0-0.3 ppb	10000
Chloroform	1.2	0-3 ppb	10000
Freon-113	1.3	0-4.5 ppb	1000000
Dichloroethylene	0.2	0-1 ppb	200000
1,1,1 Trichloroethane	14	0-9.7 ppb	350000
Carbon Tetrachloride	0.1	0-0.15 ppb	5000
Trichloroethylene	1.0	0-1.5 ppb	25000
Ethylenedibromide	0.03	0-0.18 ppb	130
Perchloroethylene	8.3	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	42		100000

2715 Miranda	ppb(unless stated) concentration	range LA Basin	Ca OSHA Std ppb
Methane	22.4 ppm	1.5 - 10 ppm	oxygen must not be less than 19.5 %
carbon dioxide	598 ppm		5000000
non-methane hydrocarbons	6.3 ppm		no std
Vinyl Chloride	14/400	0-3 ppb	1000
Methyl Chloride	3.3	0-3.8 ppb	50000
Freon-12	4.6	0-50 ppb	no std
Methylene Chloride	6.1	0-6.3 ppb	100000
Freon-11	17	0-1.8 ppb	no std
Vinylidene Chloride	6.5	0-0.3 ppb	10000
Chloroform	0.6	0-3 ppb	10000
Freon-113	1.5	0-4.5 ppb	1000000
Dichloroethylene	-	0-1 ppb	200000
1,1,1 Trichloroethane	6.1	0-9.7 ppb	350000
Carbon Tetrachloride	0.09	0-0.15 ppb	5000
Trichloroethylene	0.9	0-1.5 ppb	25000
Ethylenedibromide	-	0-0.18 ppb	130
Perchloroethylene	3.6	0-6.3 ppb	50000
Benzene	<5	0-16 ppb	10000
Toluene	41		100000

2322 LYNN COURT – MAXIMUM OUTSIDE READING



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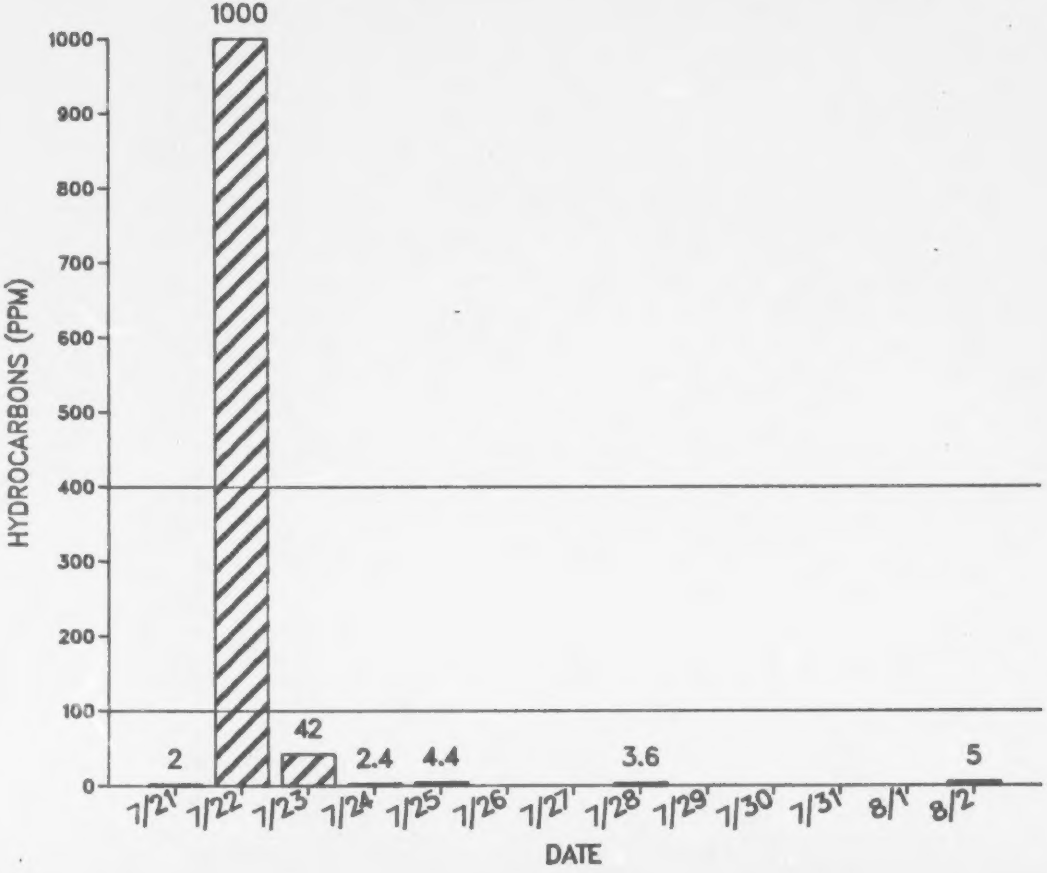

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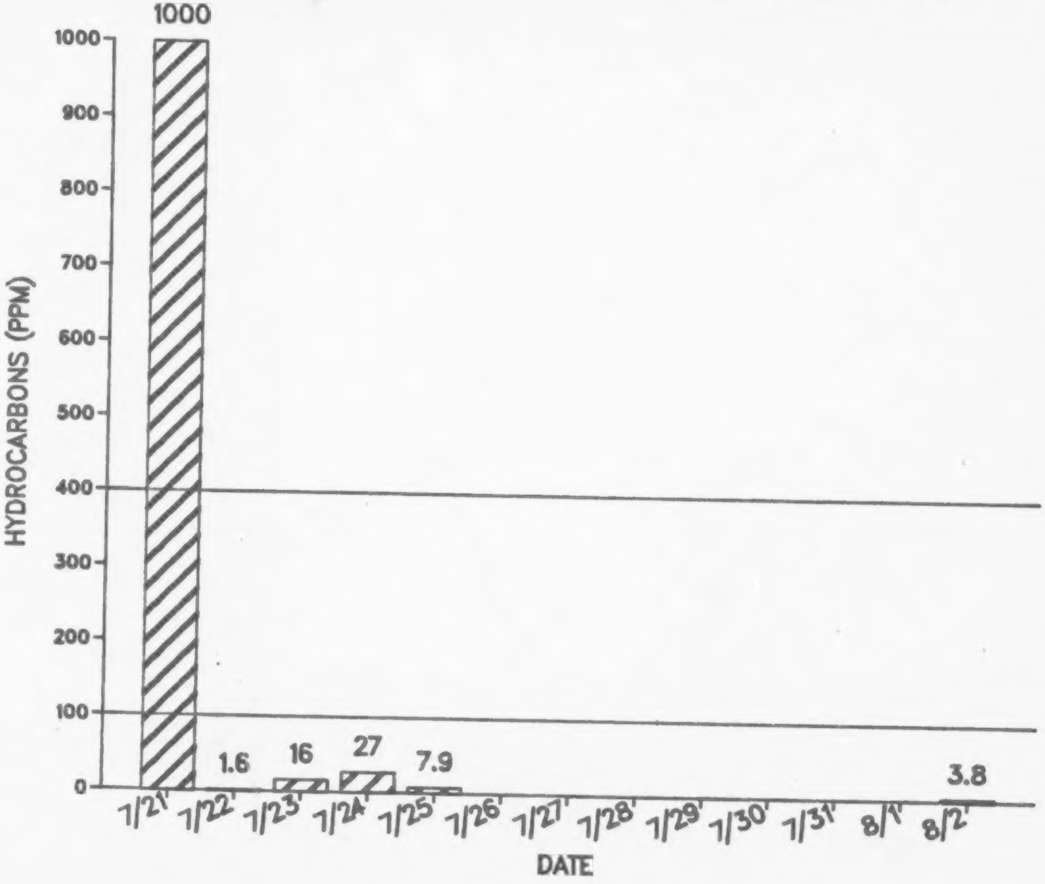
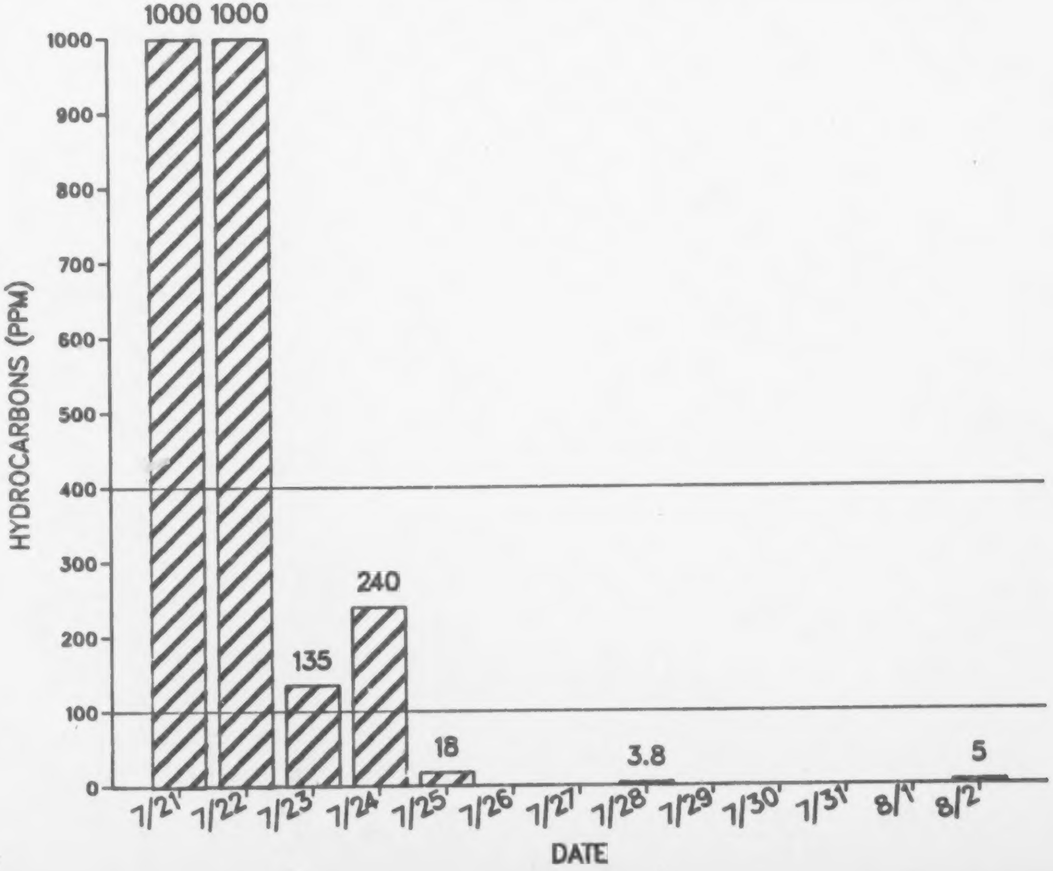
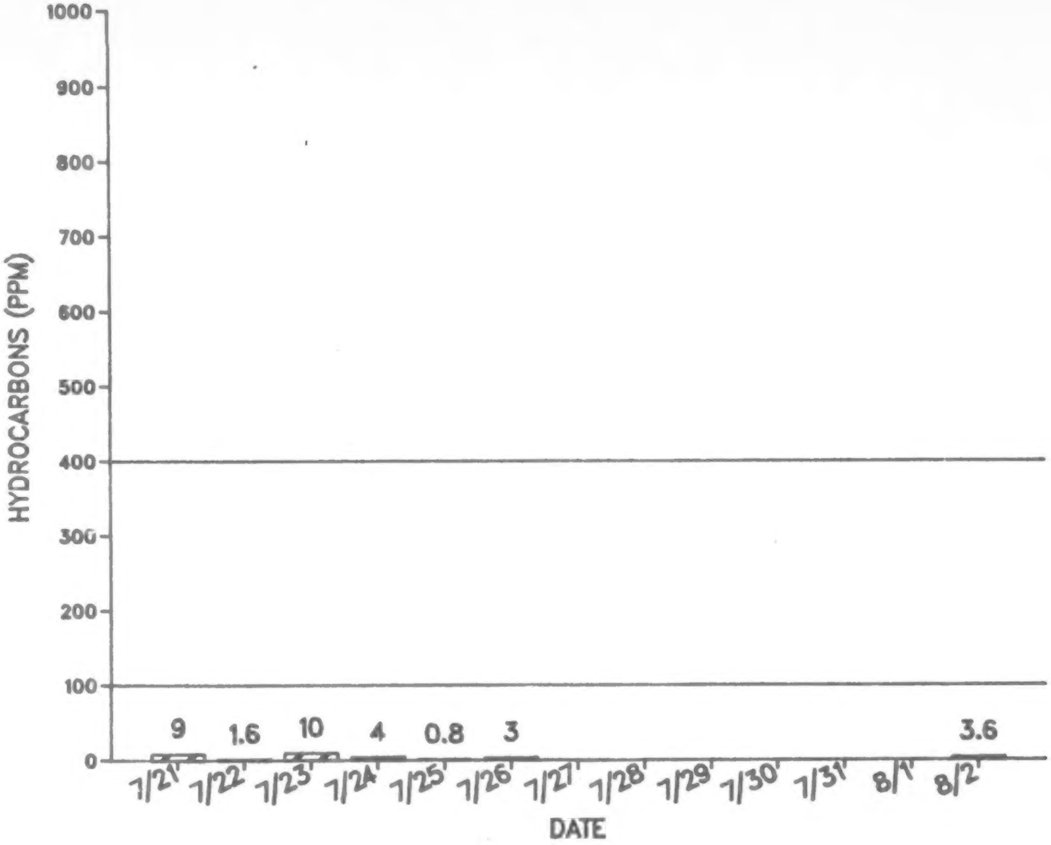




2328 LYNN COURT – MAXIMUM INSIDE READING

2334 LYNN COURT – MAXIMUM OUTSIDE READING



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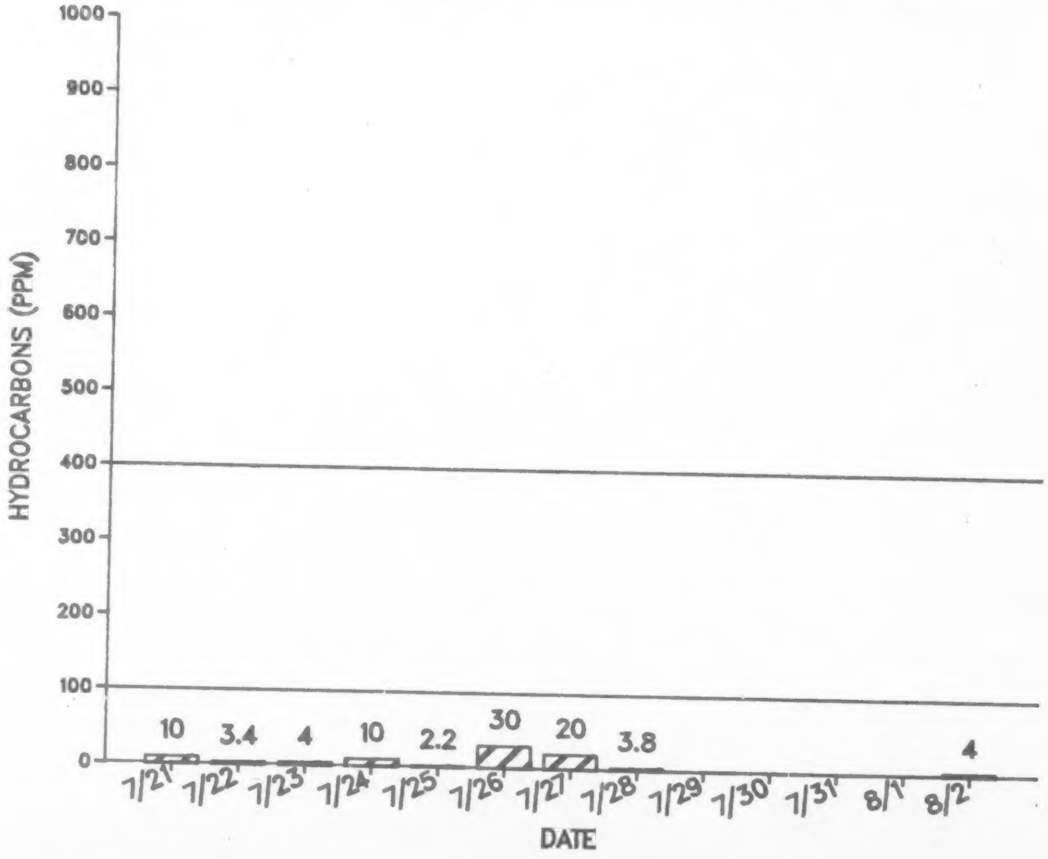

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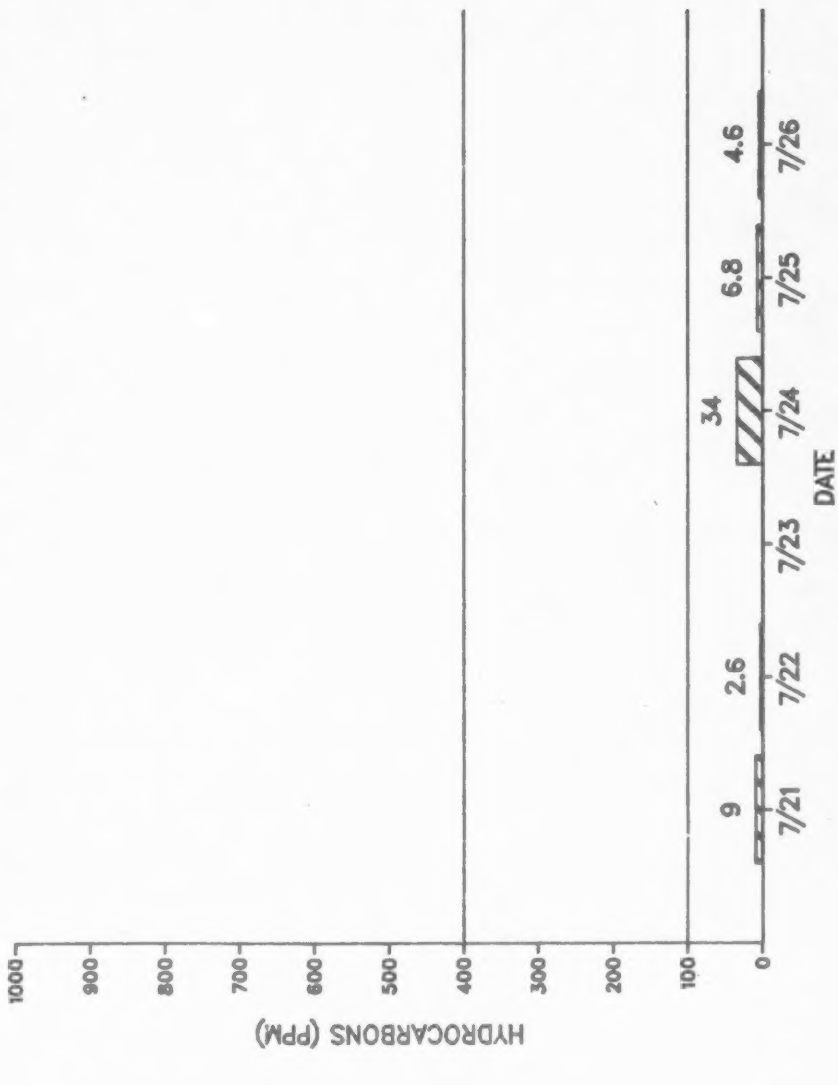

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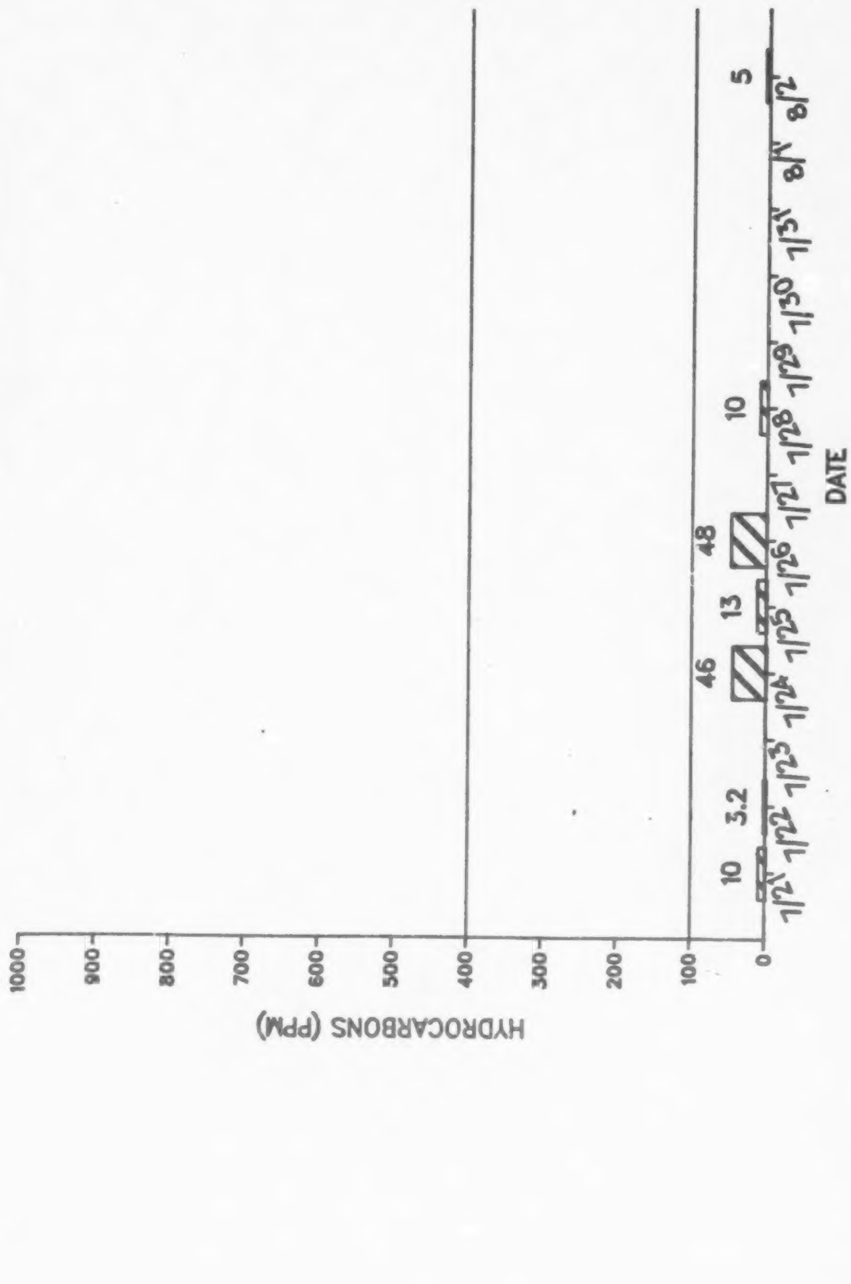

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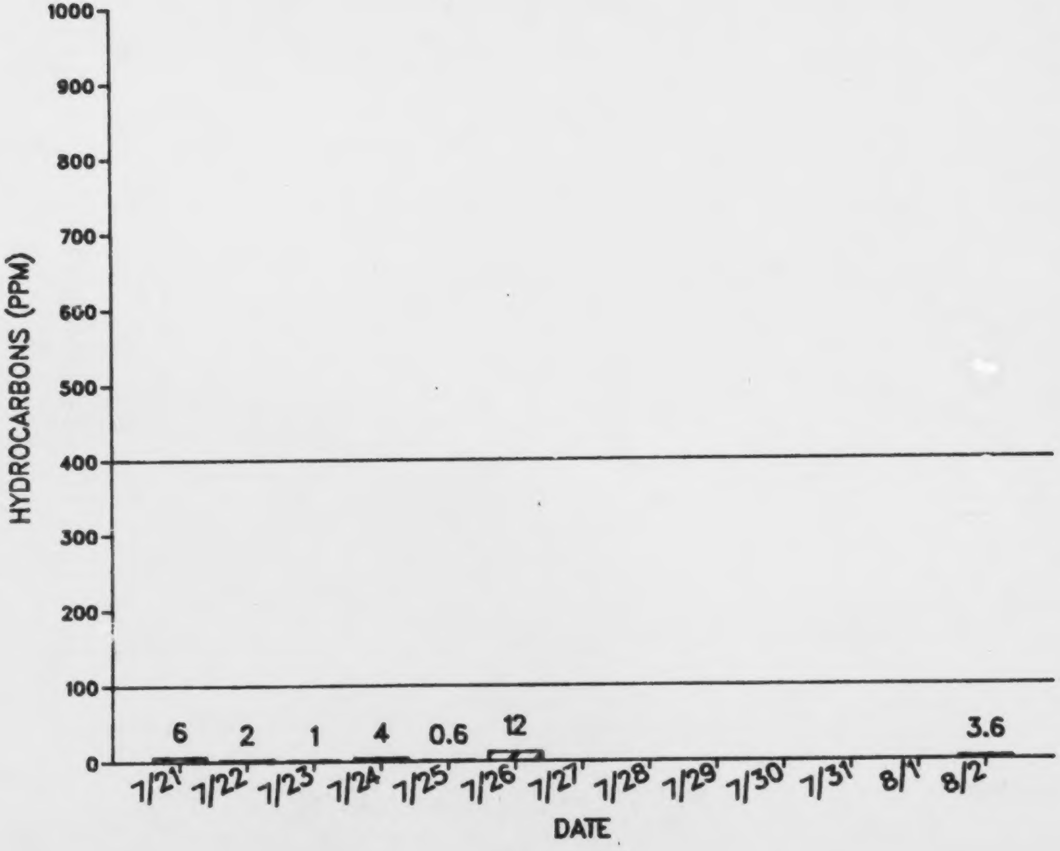

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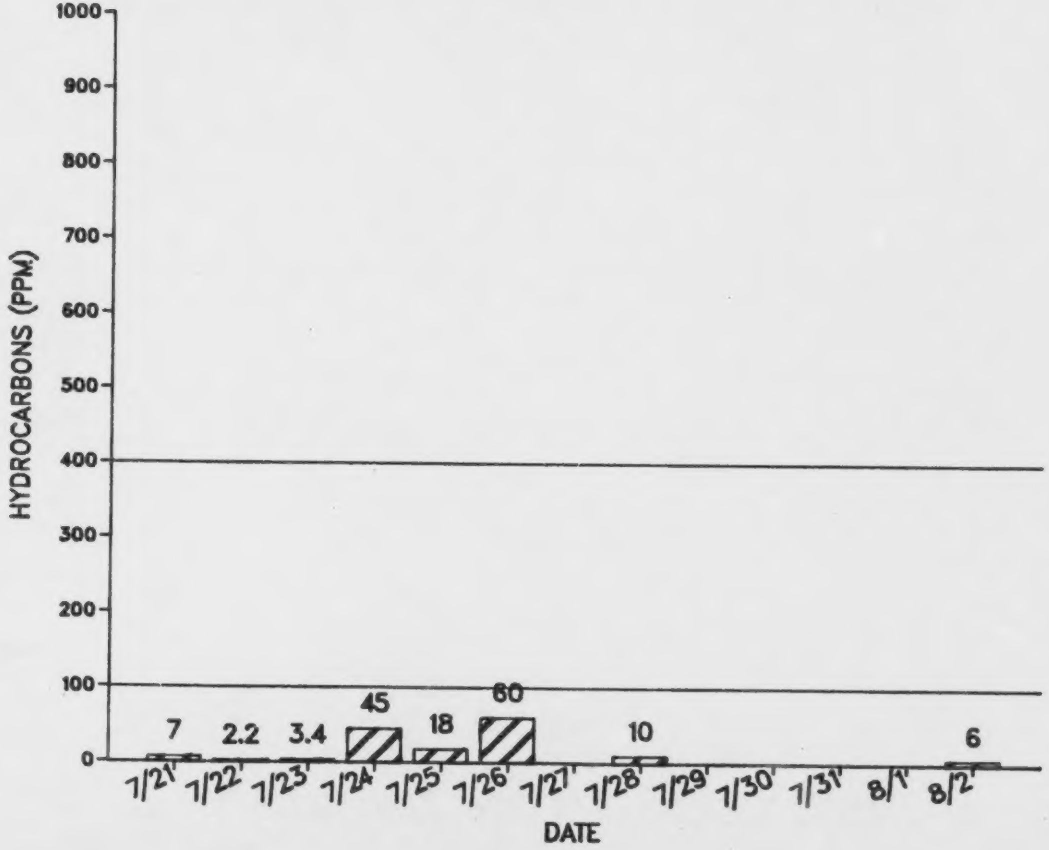

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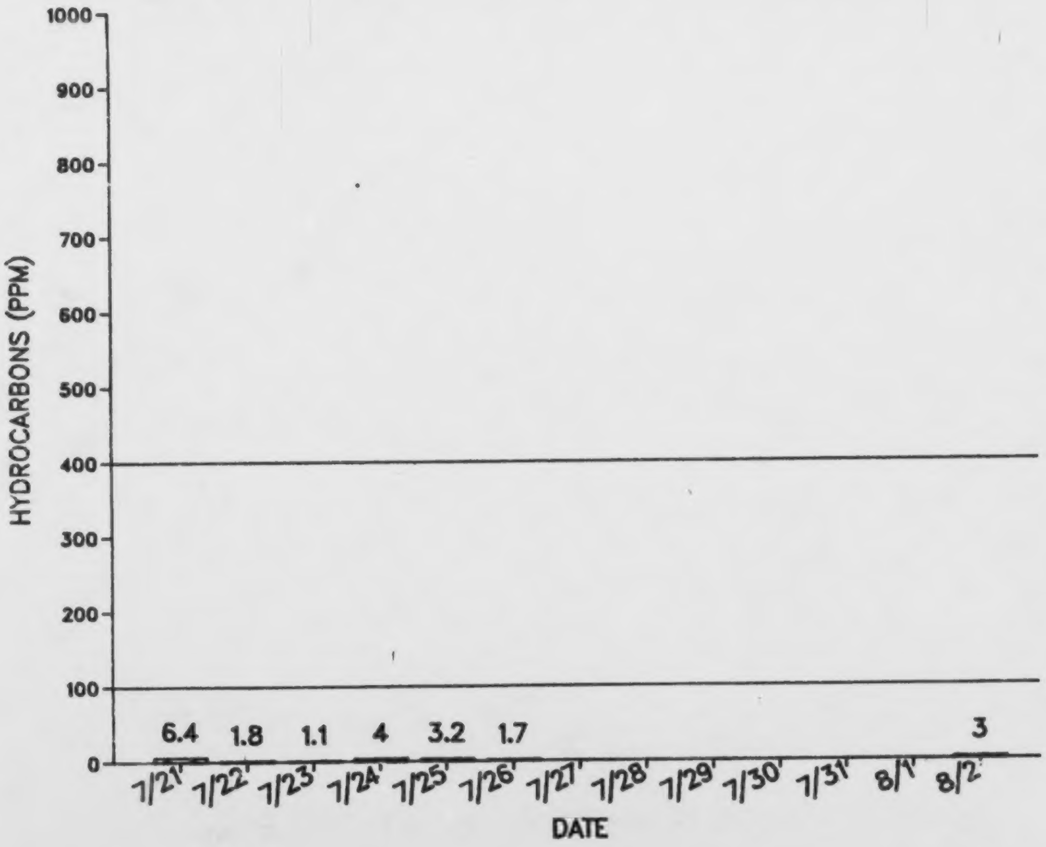

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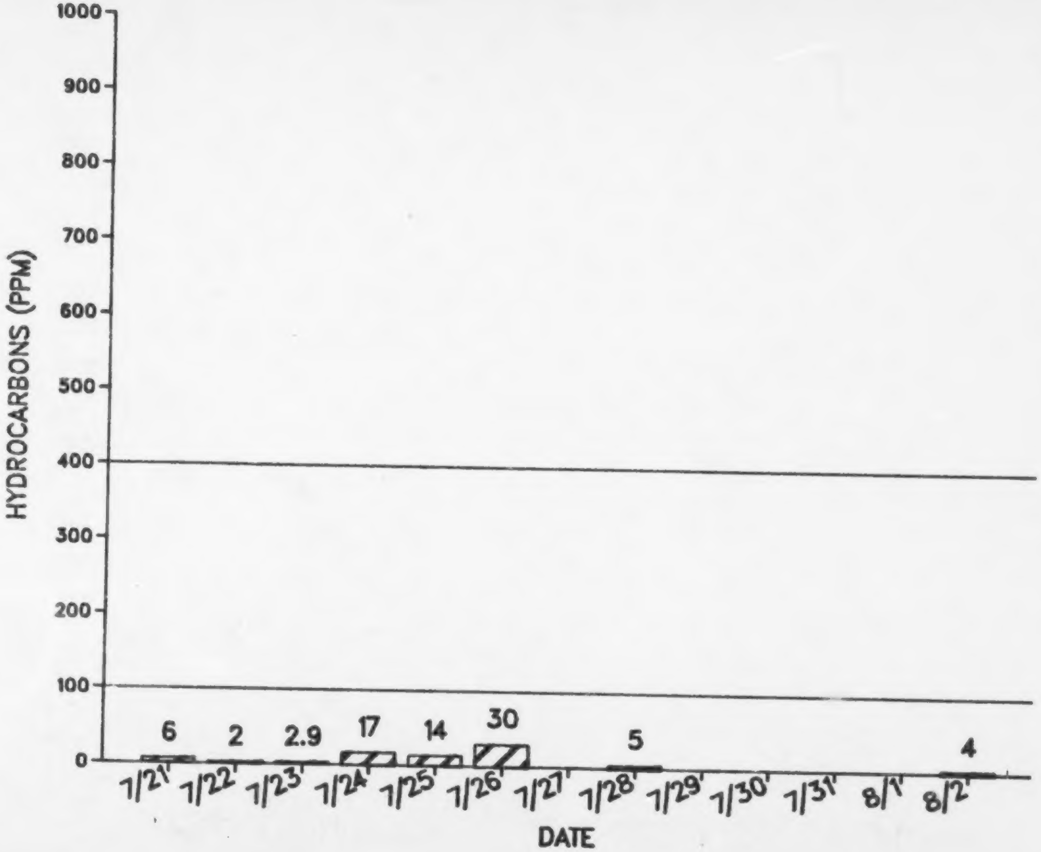

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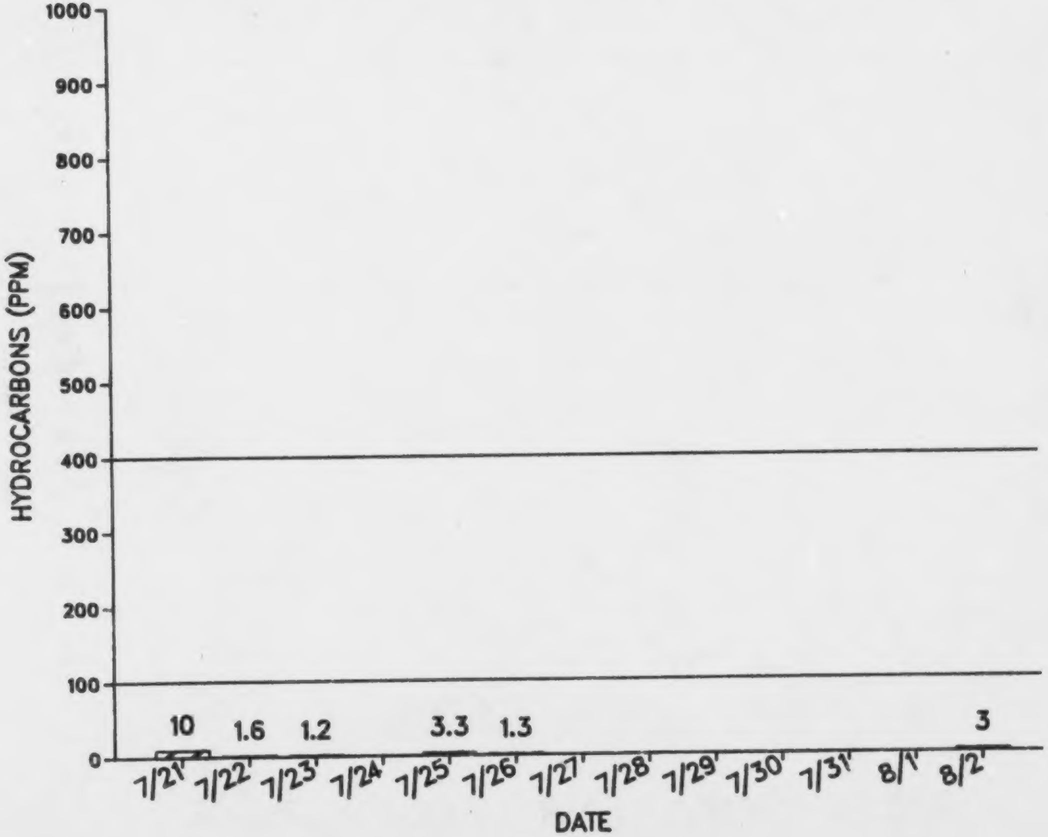

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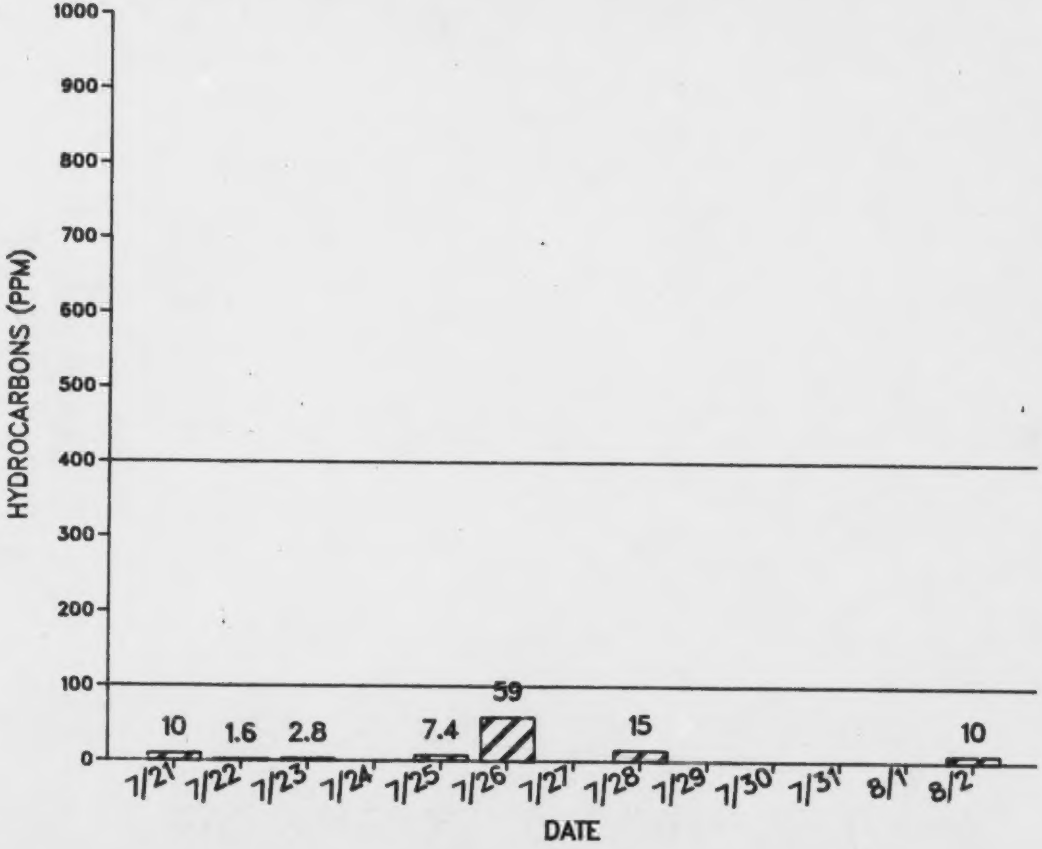
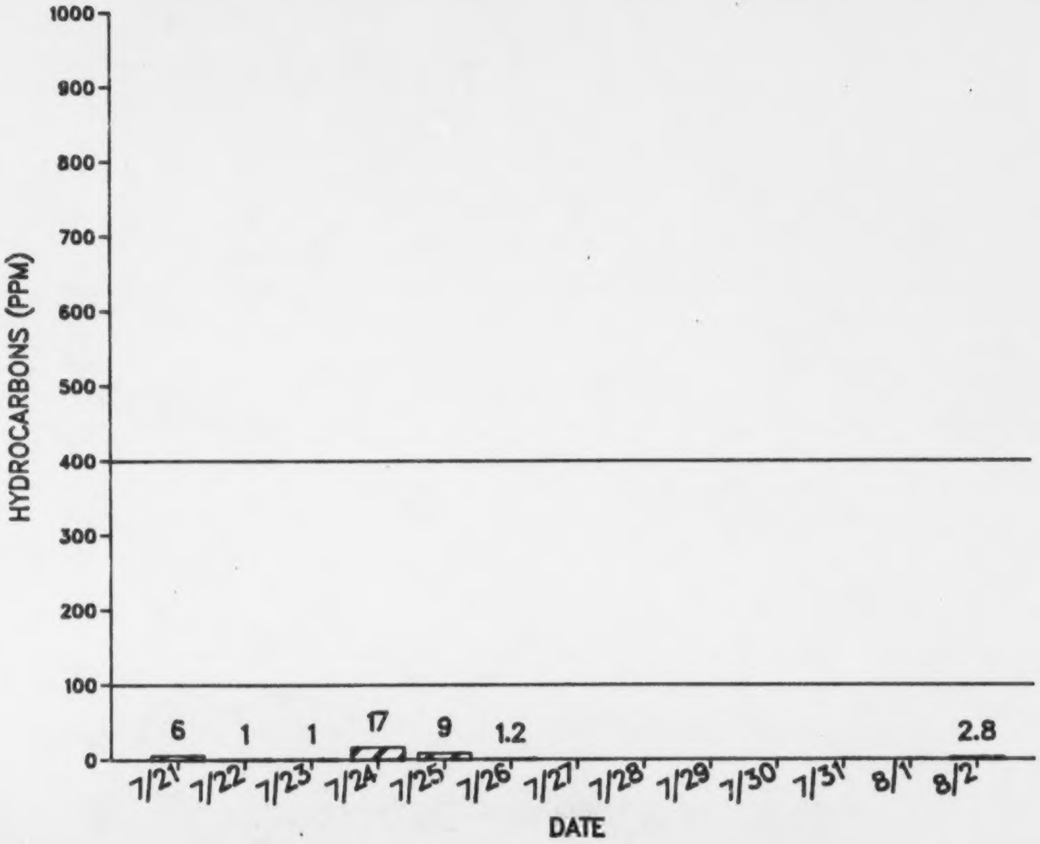


2023 NANETTE – MAXIMUM OUTSIDE READING



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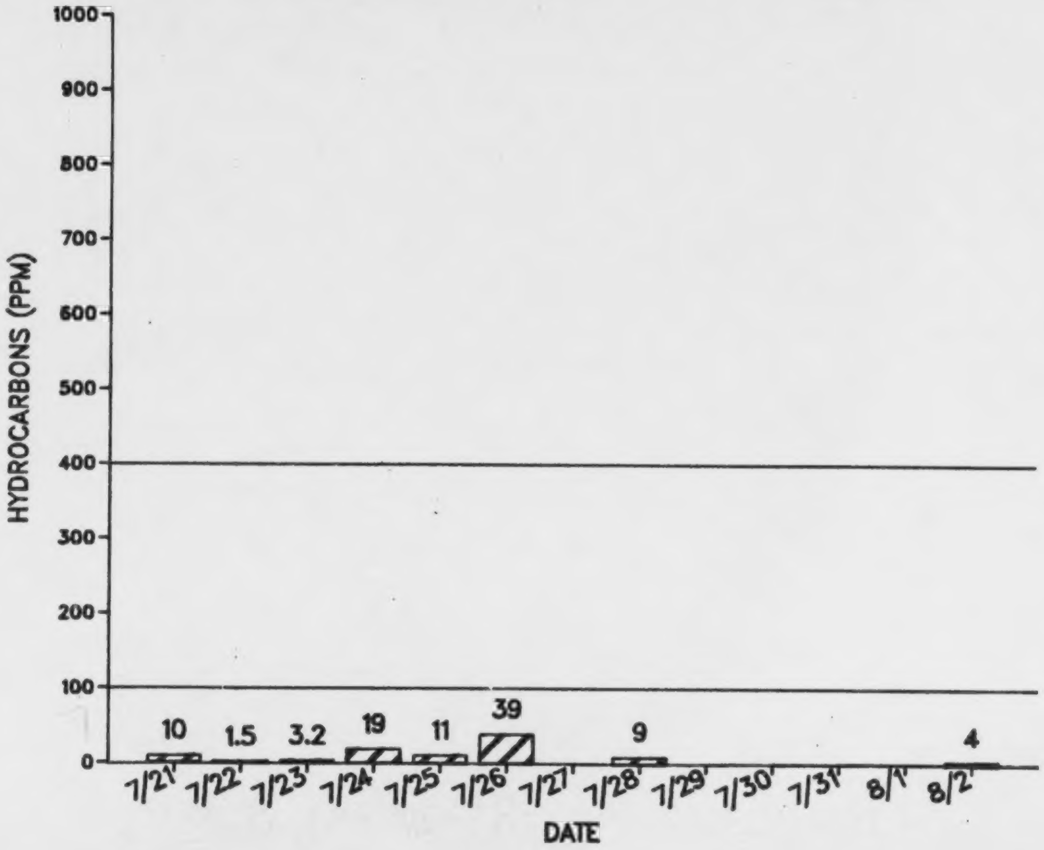

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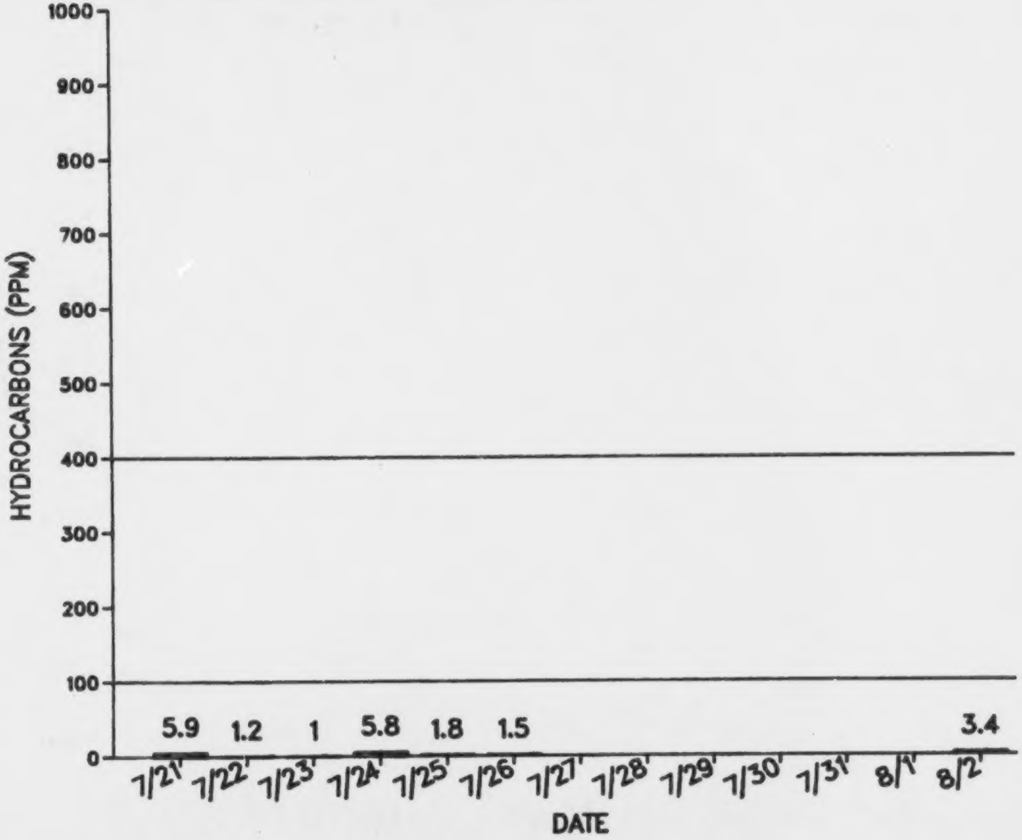

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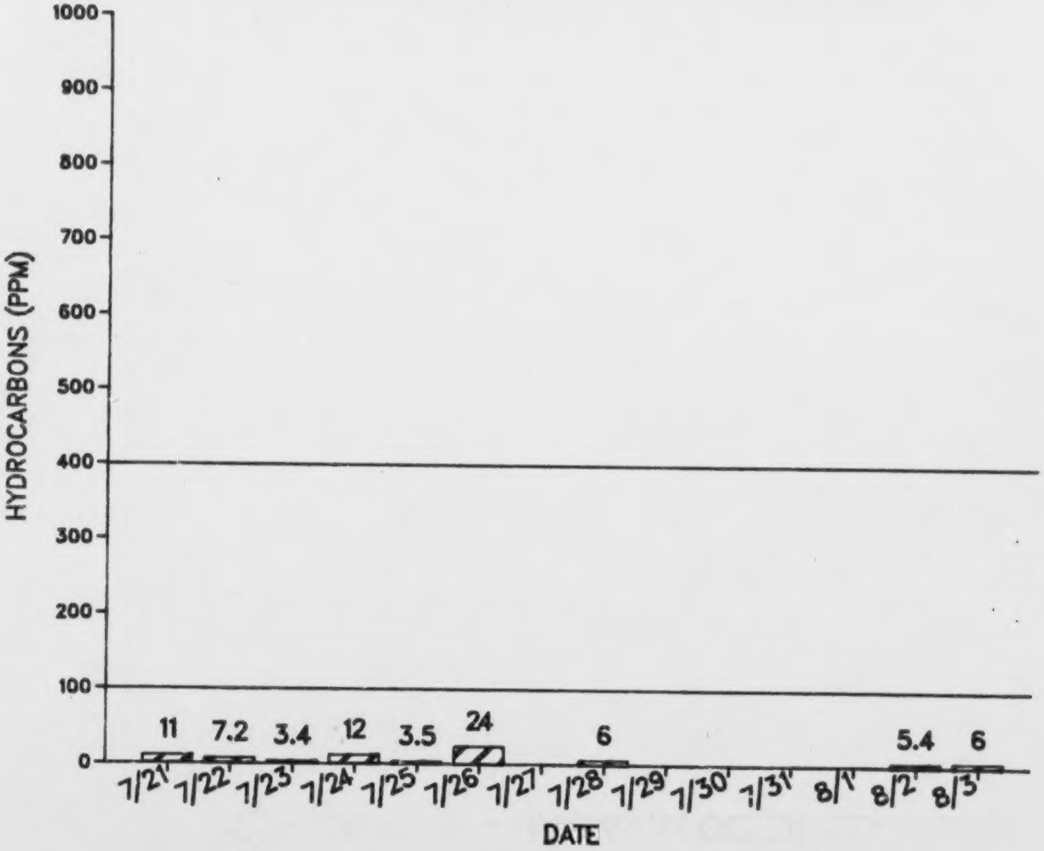

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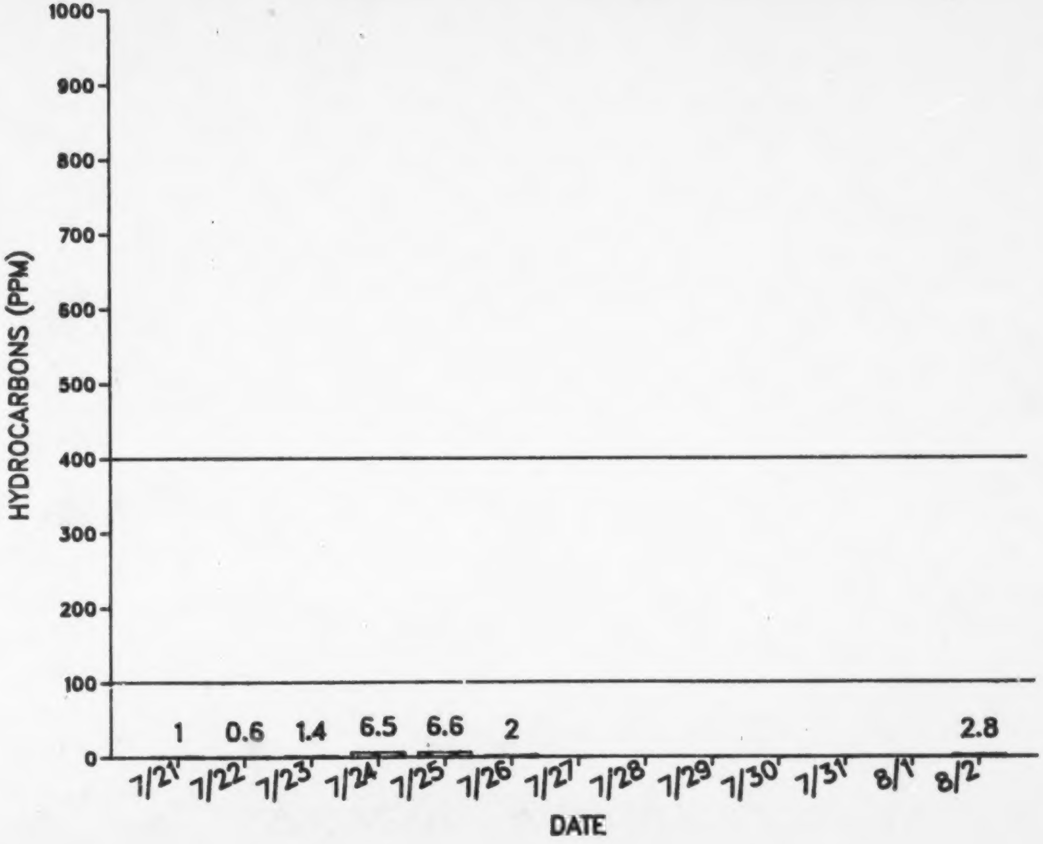
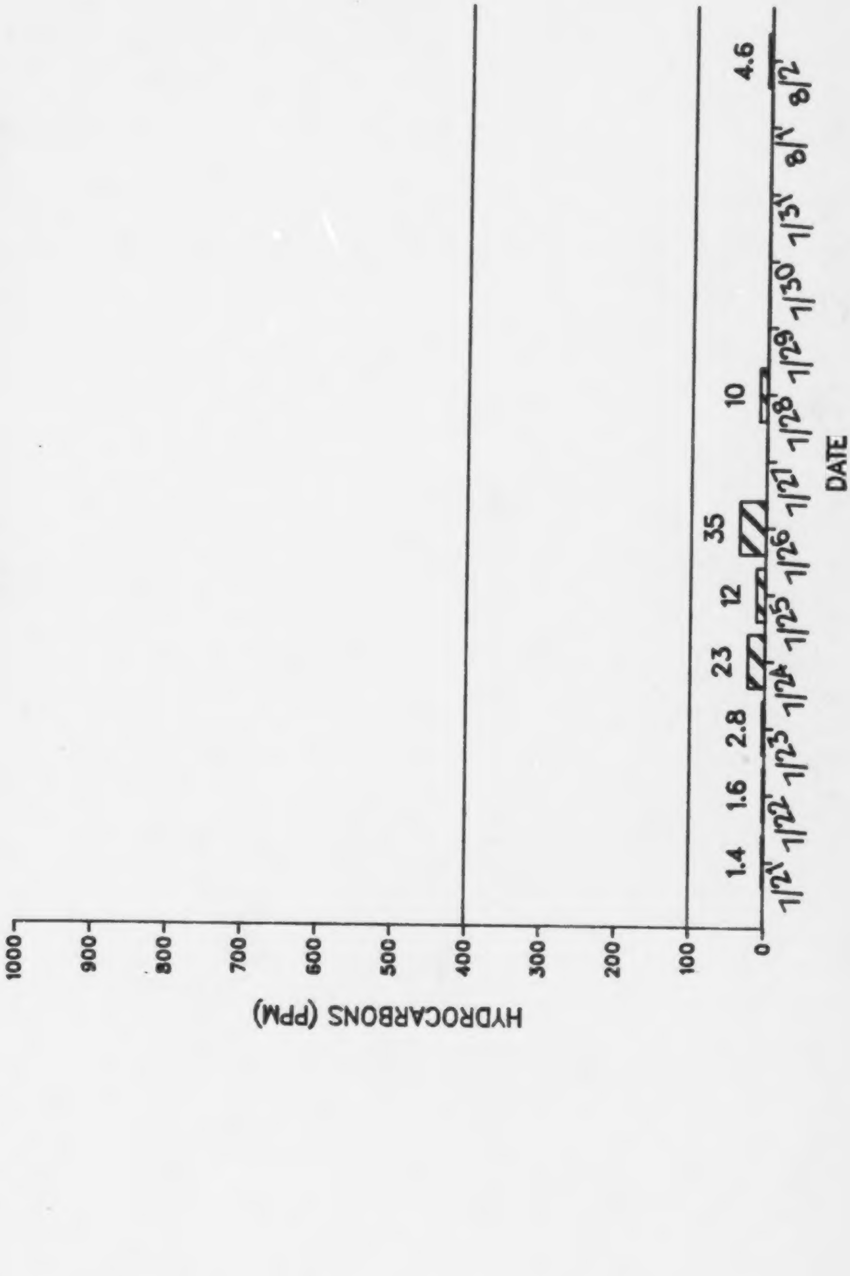
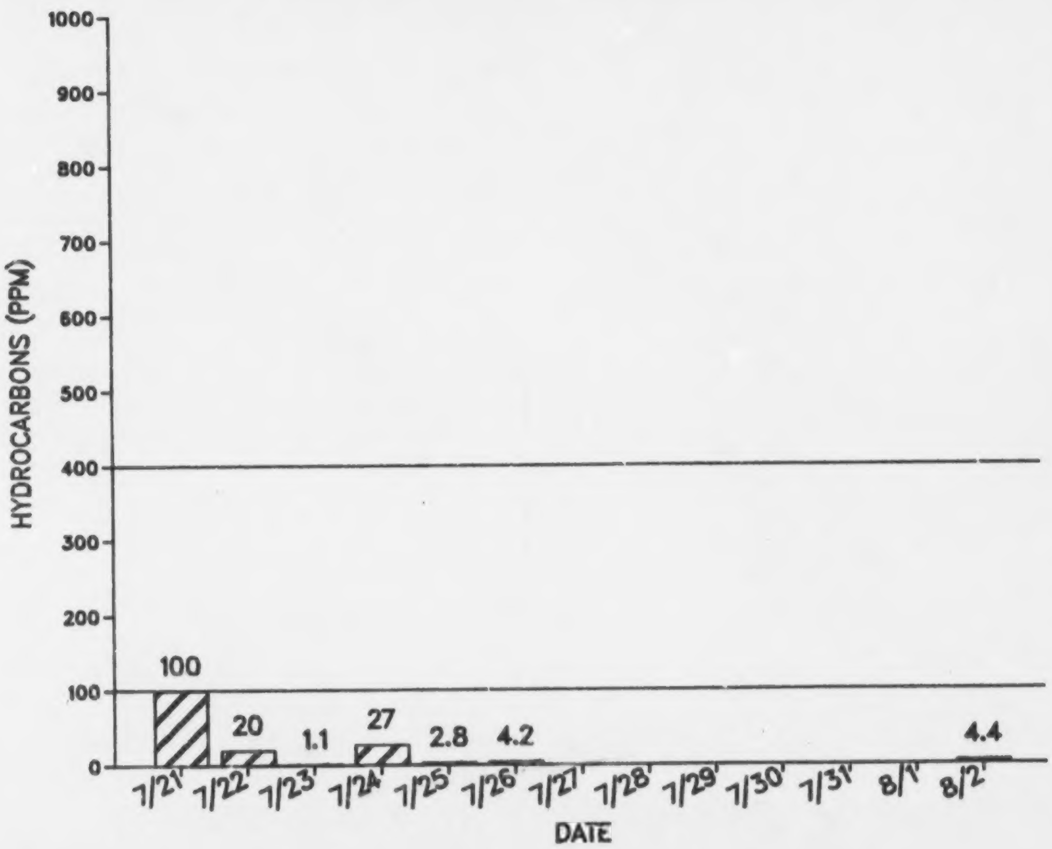




2032 NANETTE – MAXIMUM INSIDE READING

2035 NANETTE — MAXIMUM OUTSIDE READING



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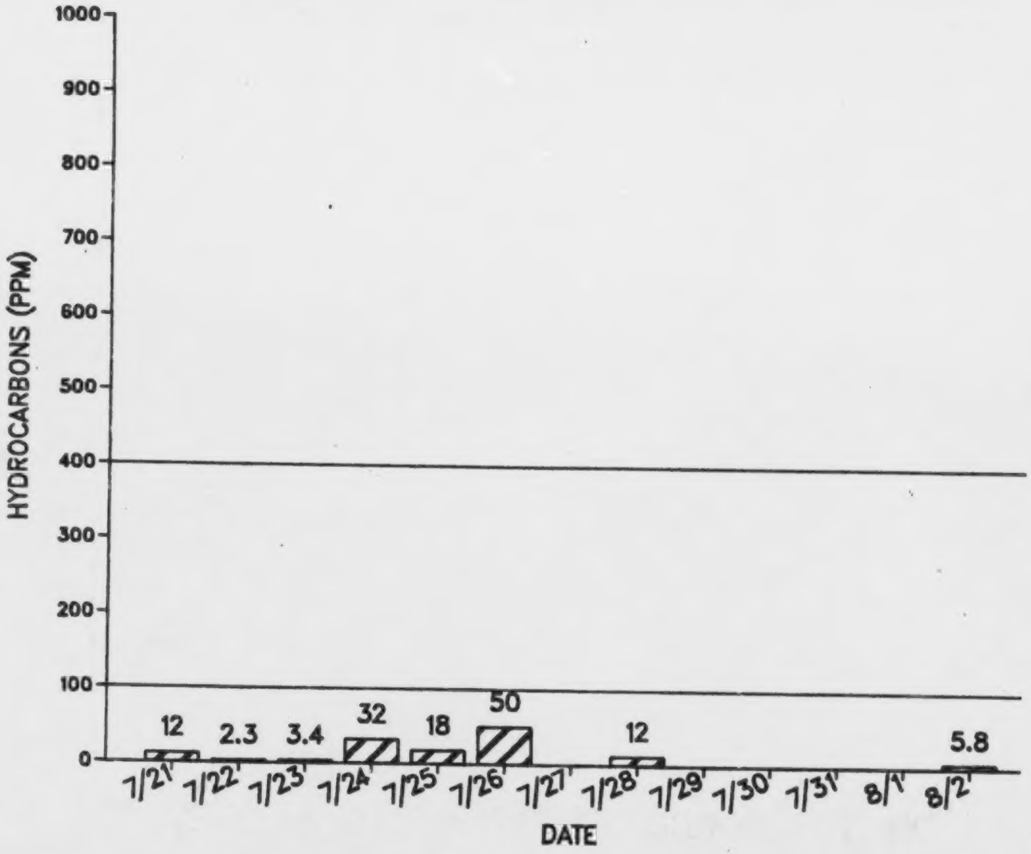

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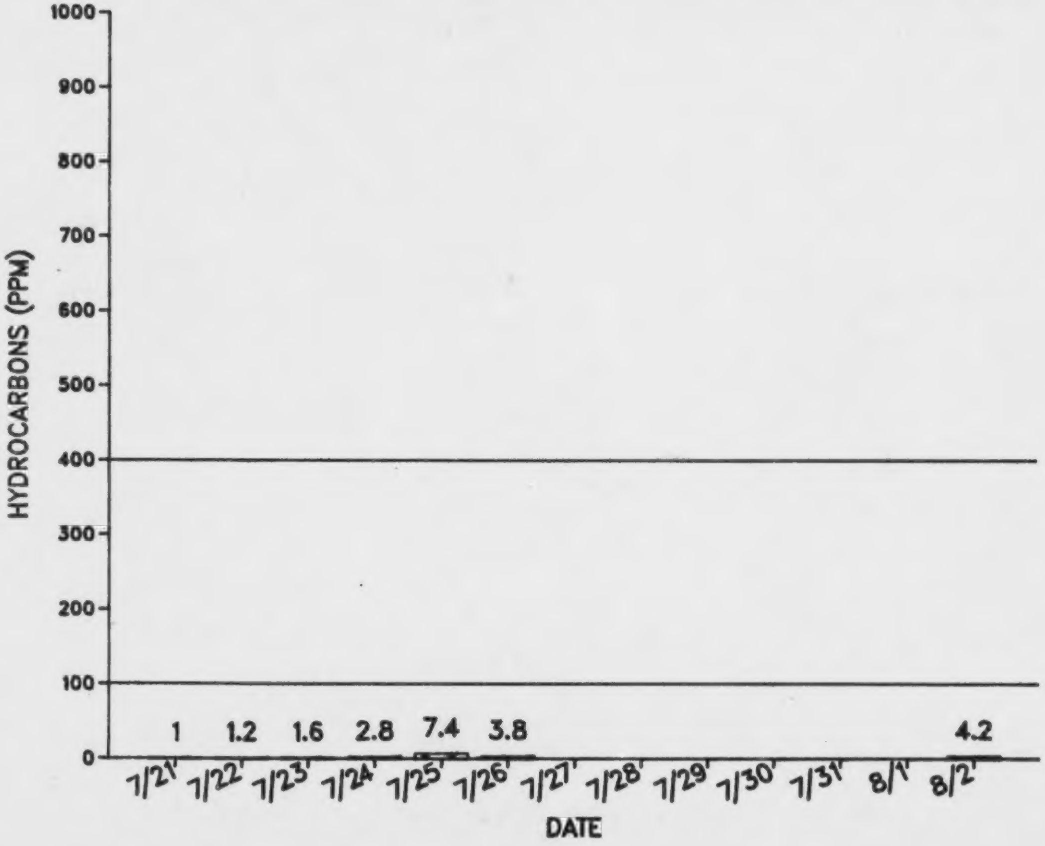

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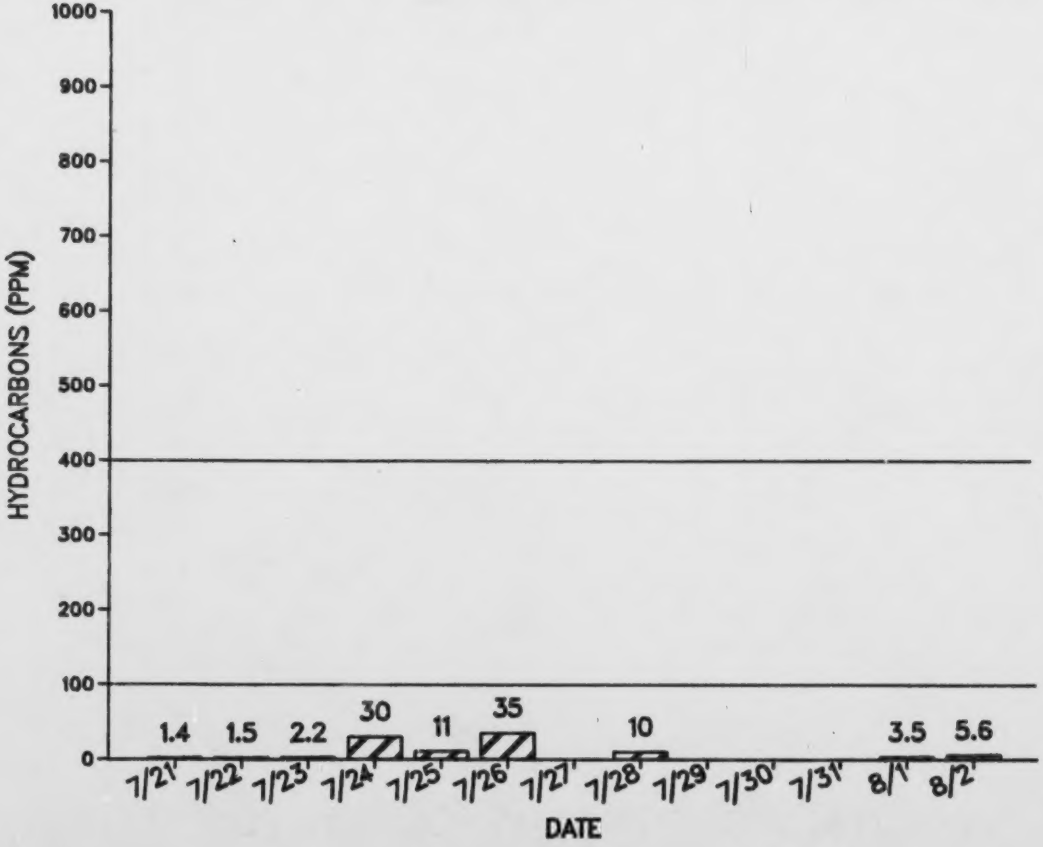

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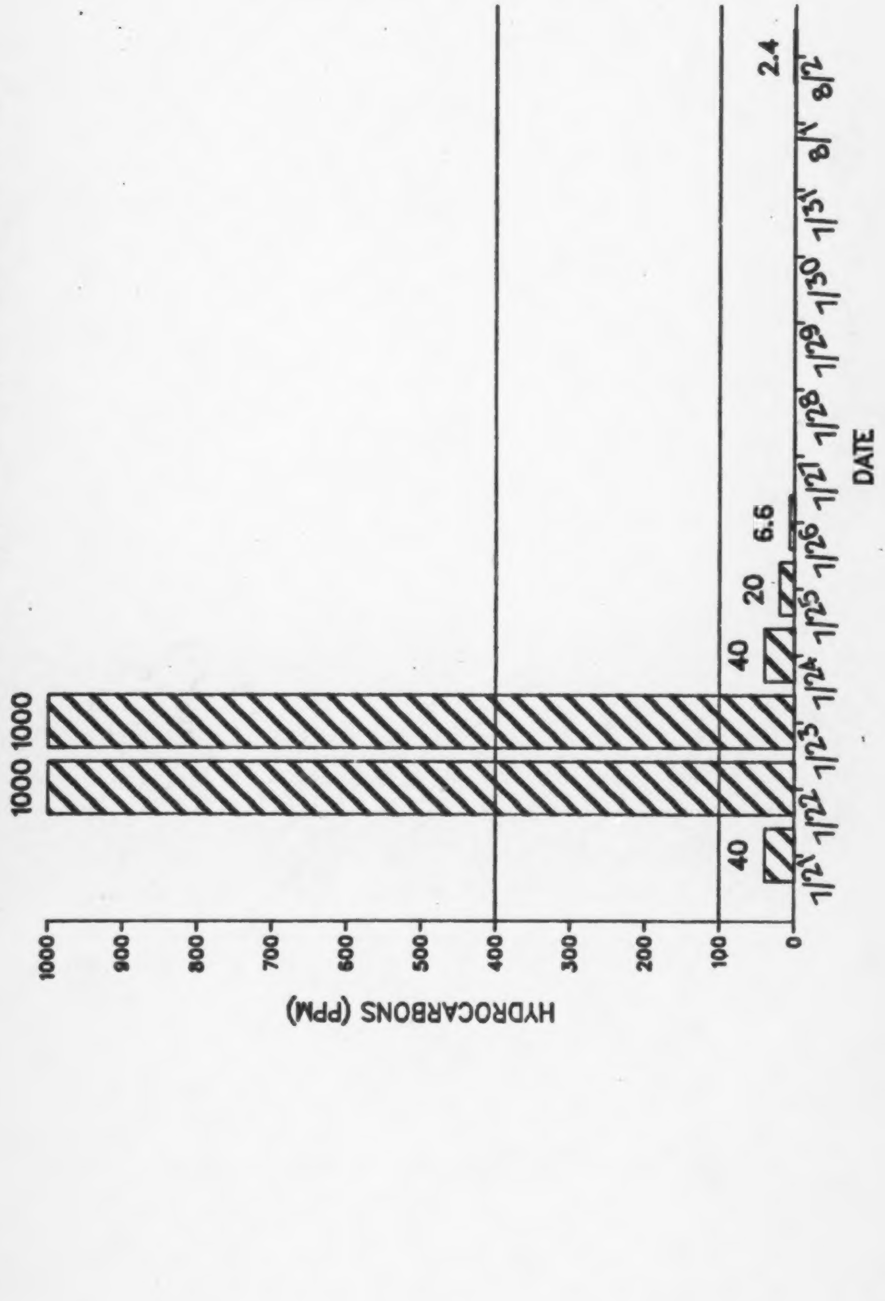

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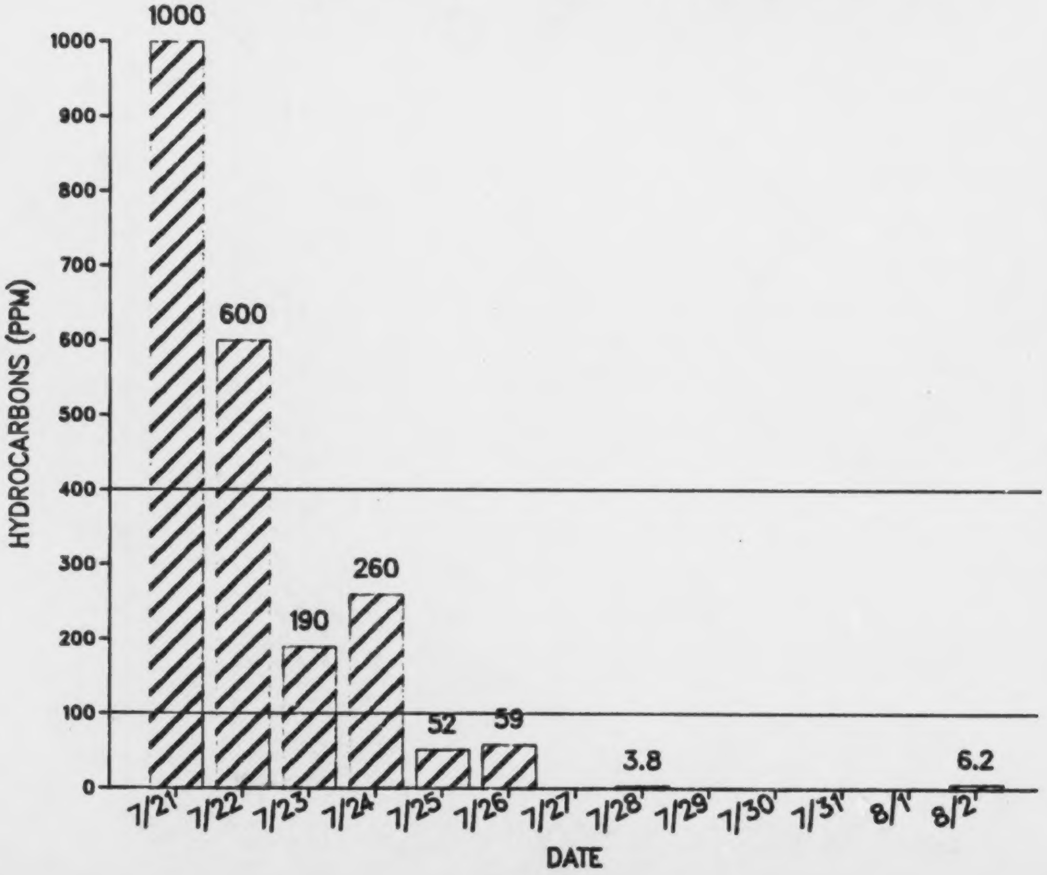

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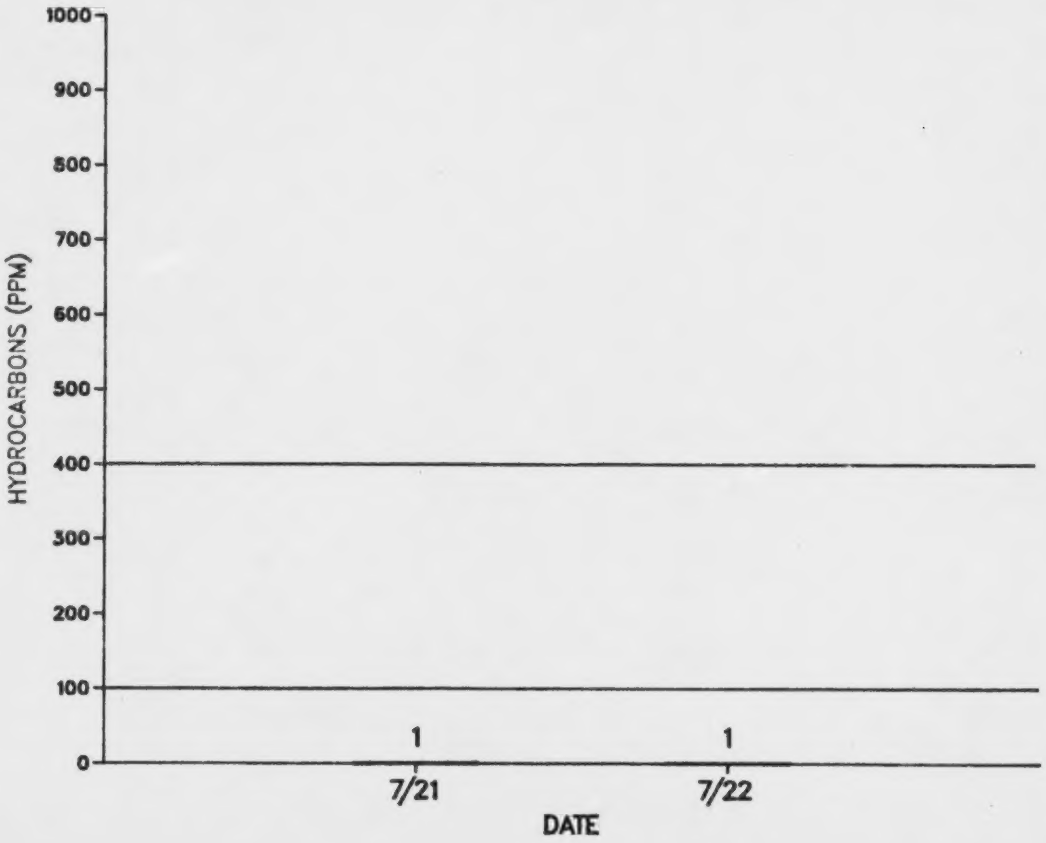
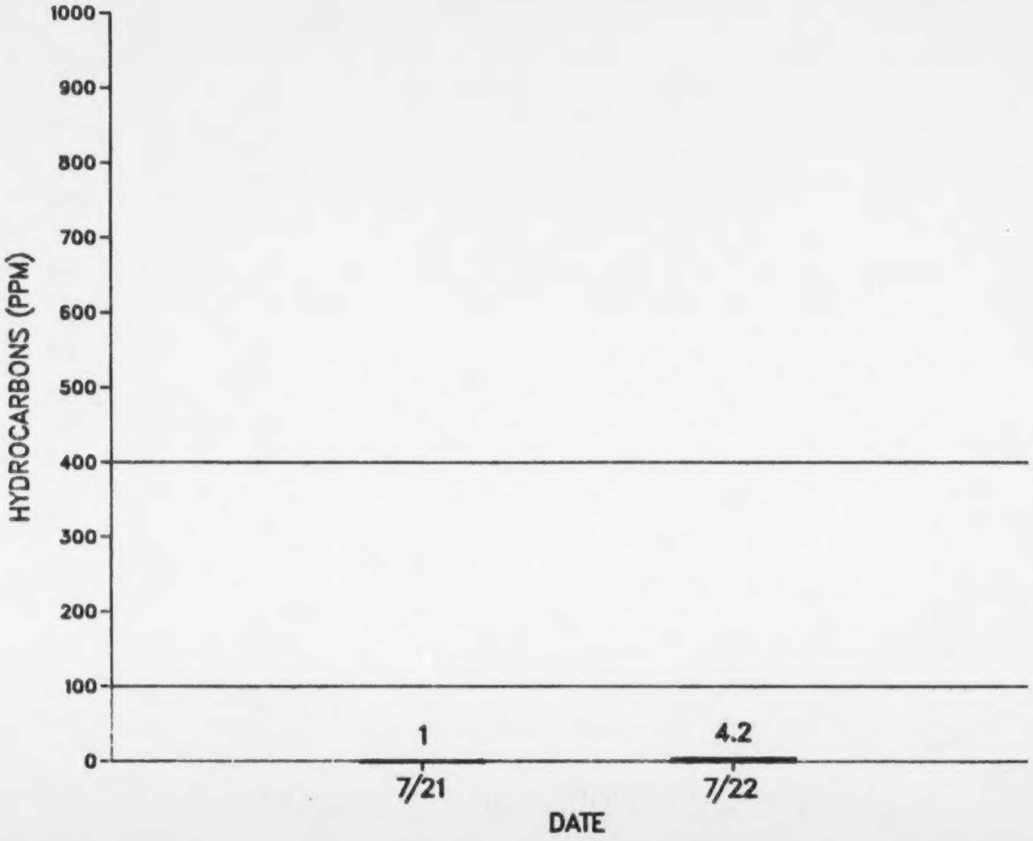
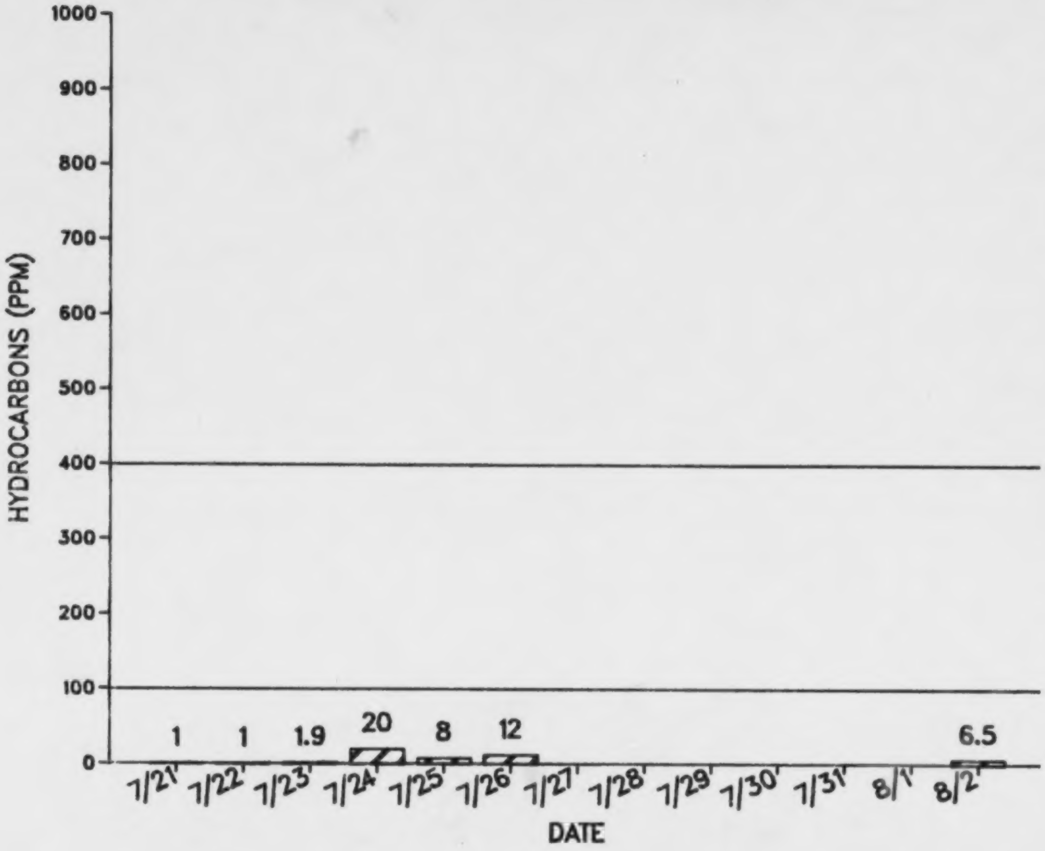




2044 NANETTE – MAXIMUM INSIDE READING

2401 LEANNA DR. – MAXIMUM OUTSIDE READING



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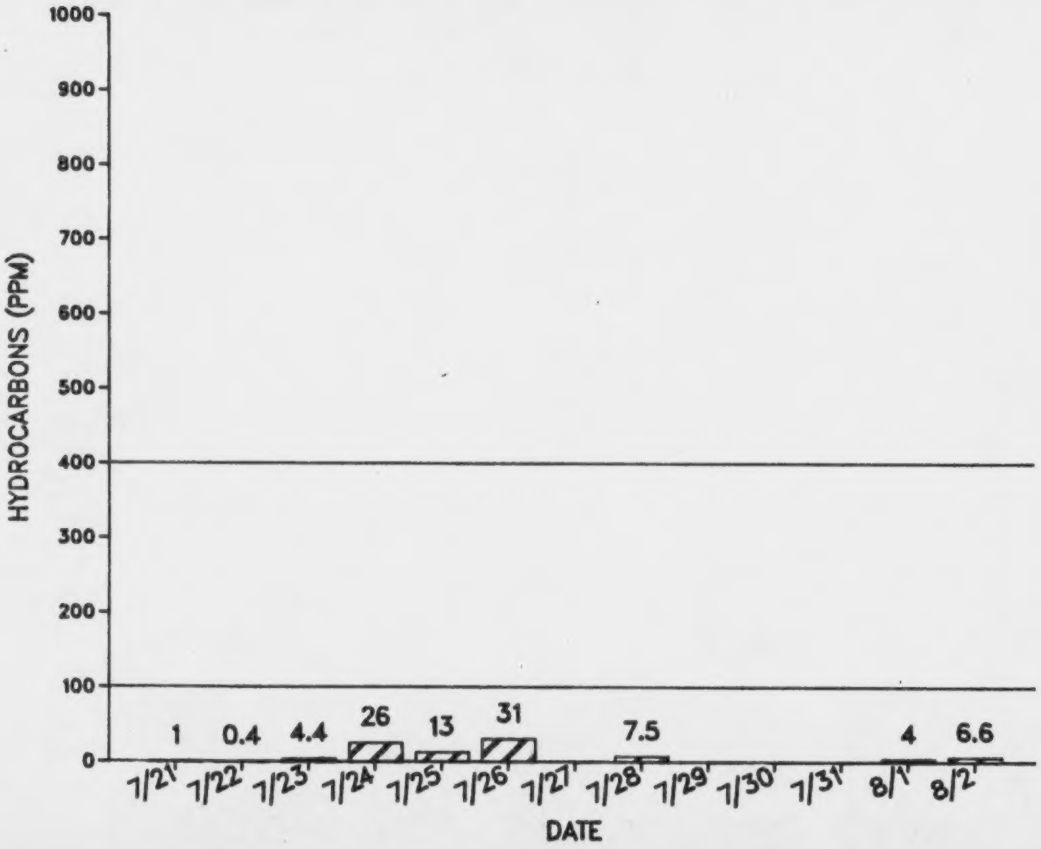

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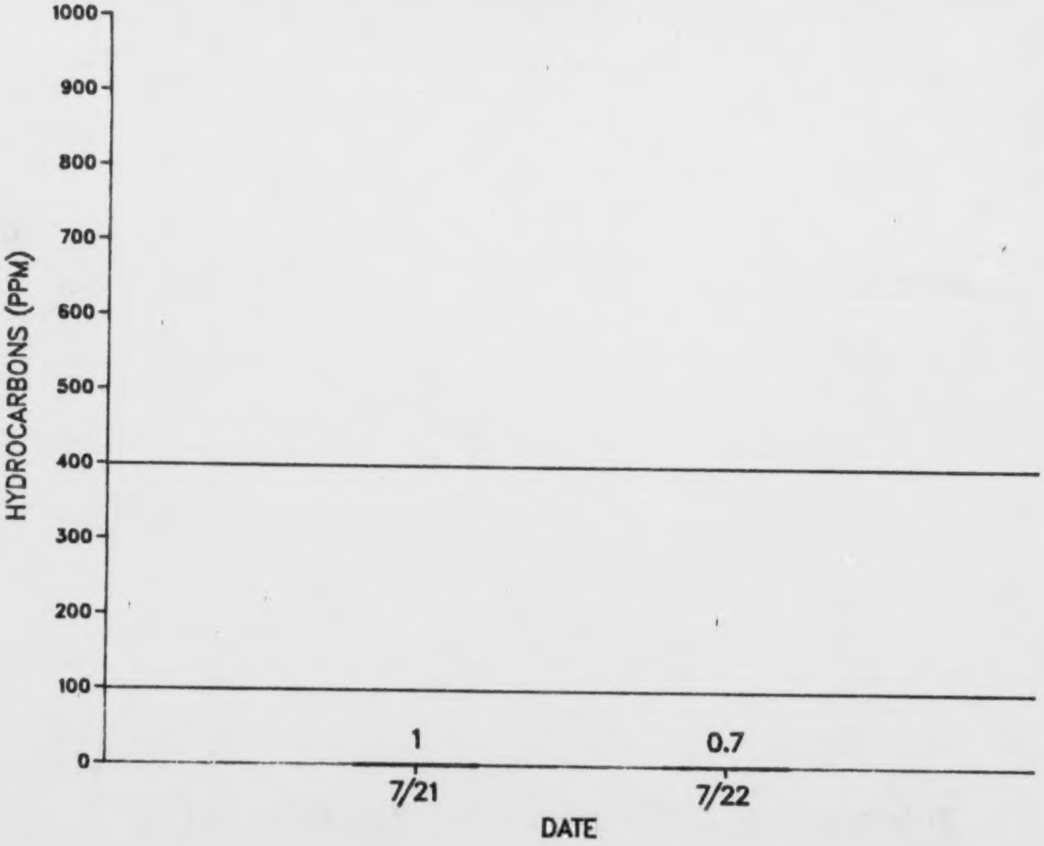

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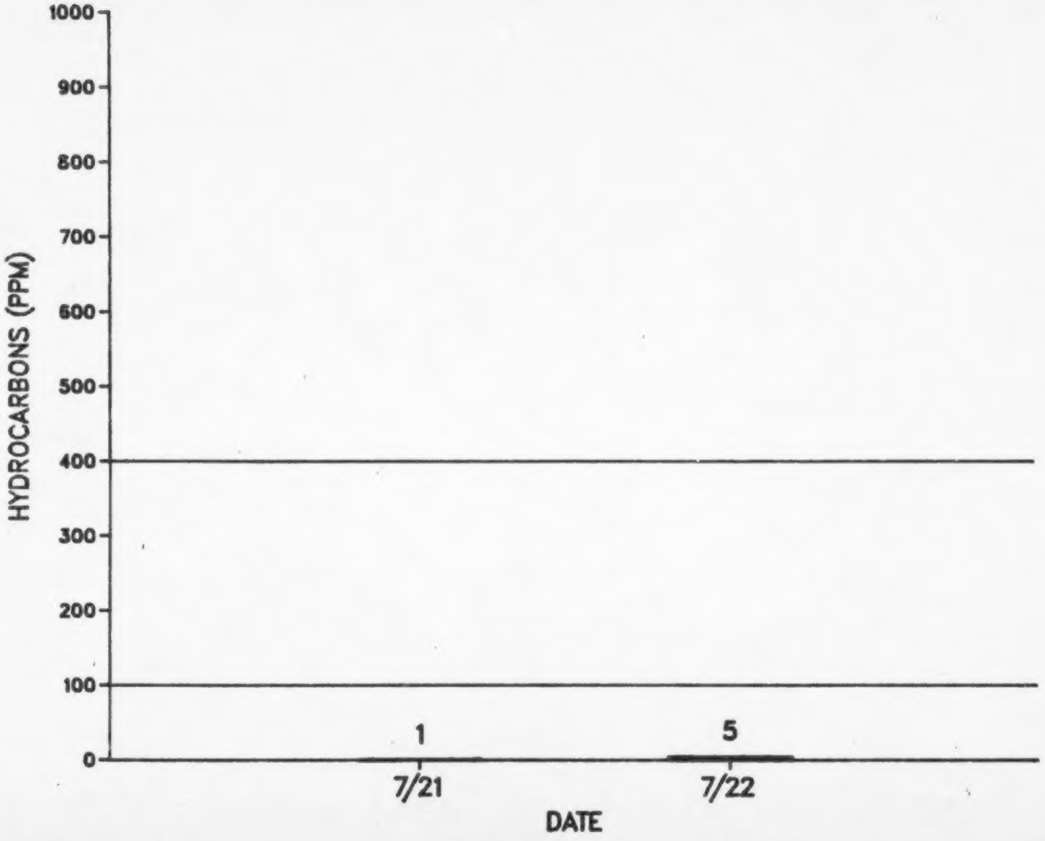

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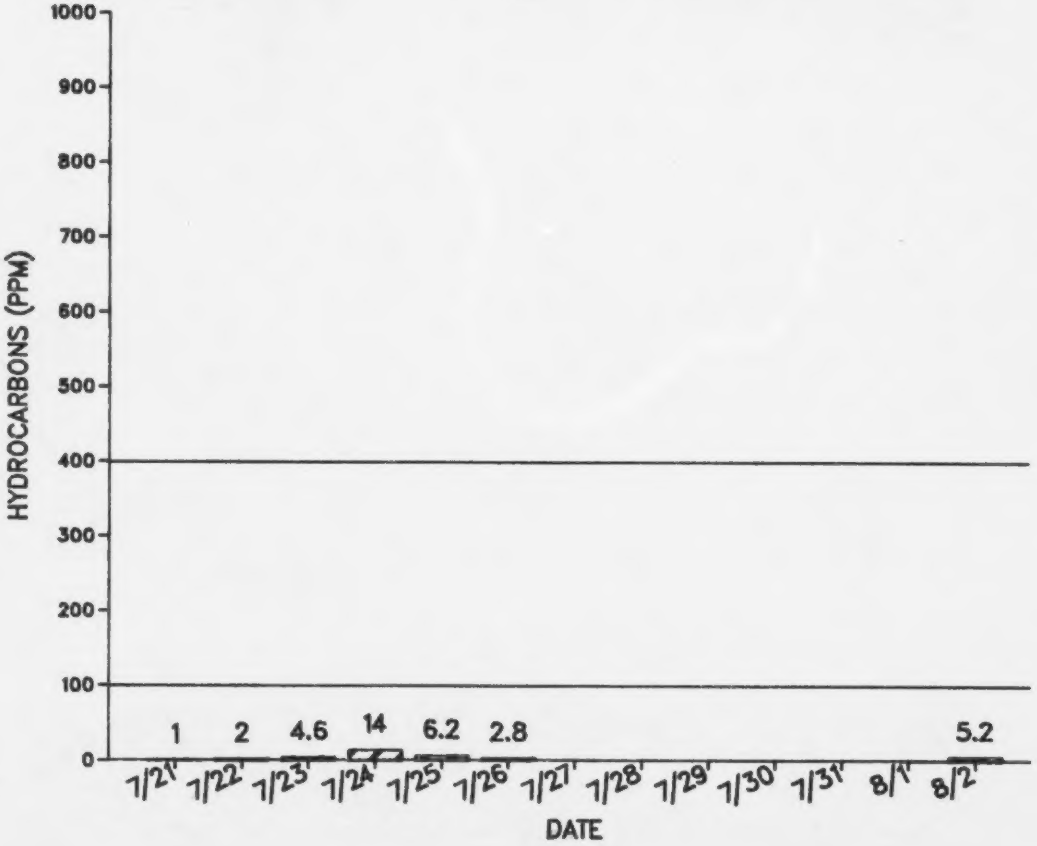

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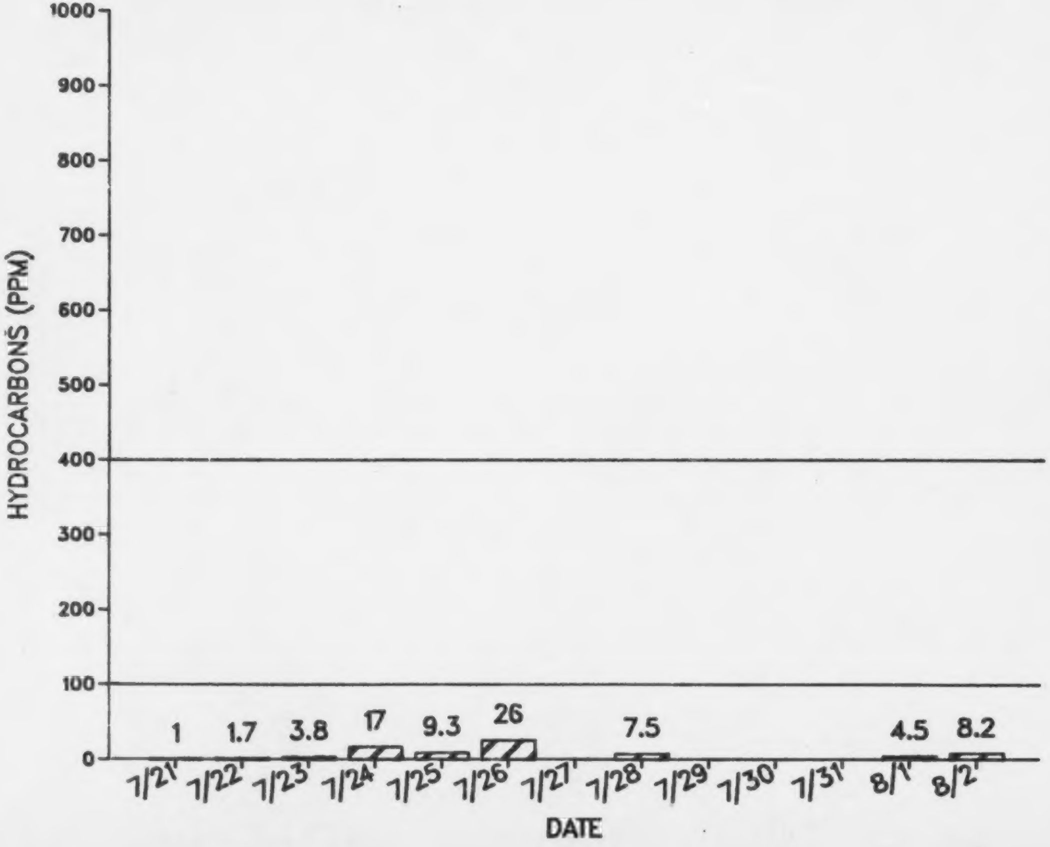
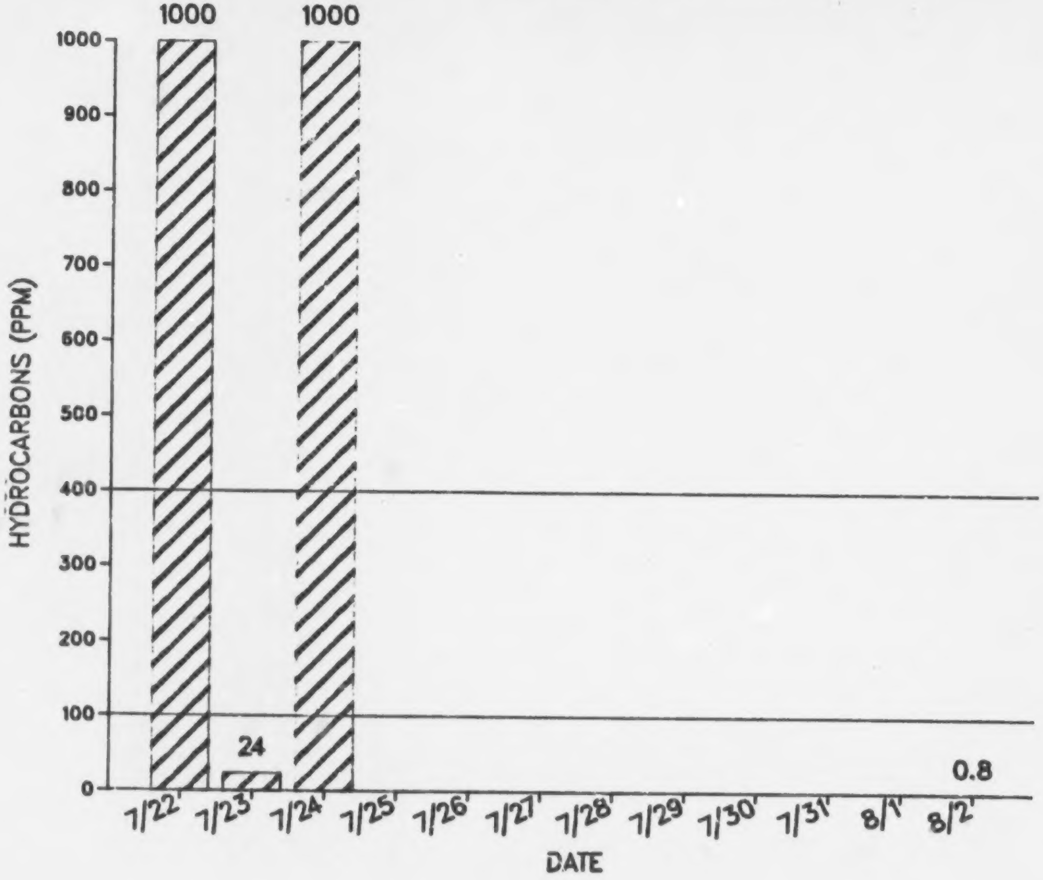


2711 MIRANDA – MAXIMUM OUTSIDE READING



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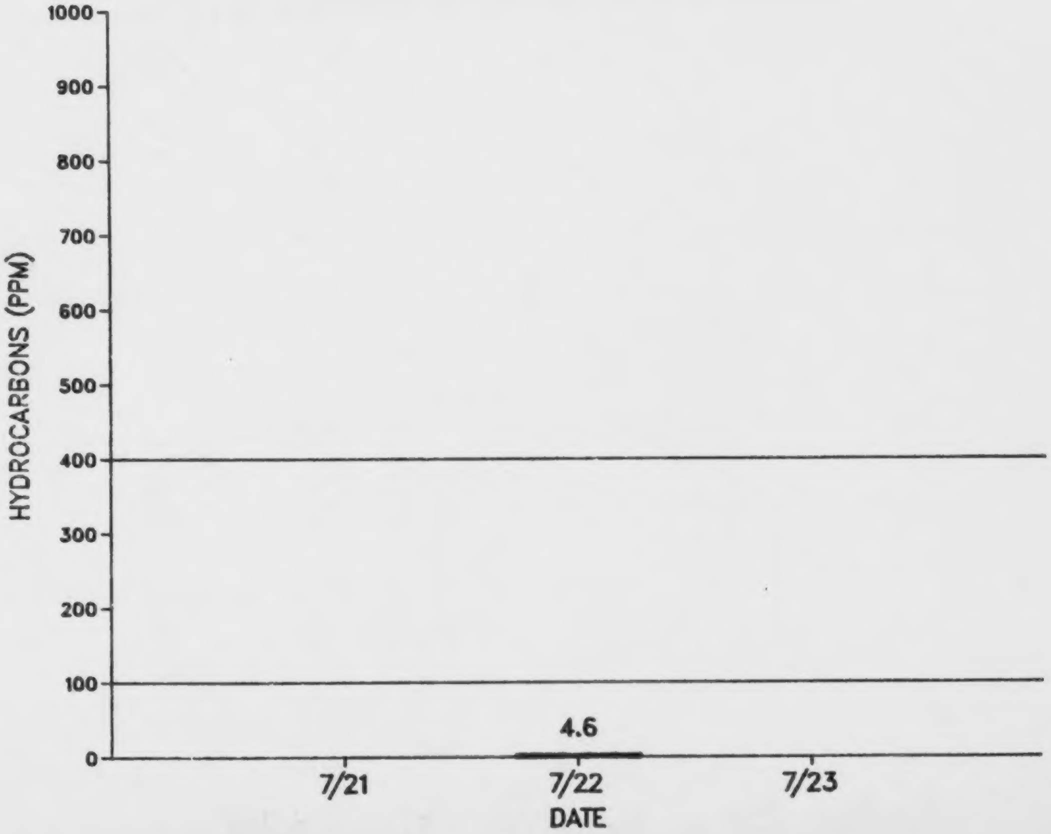
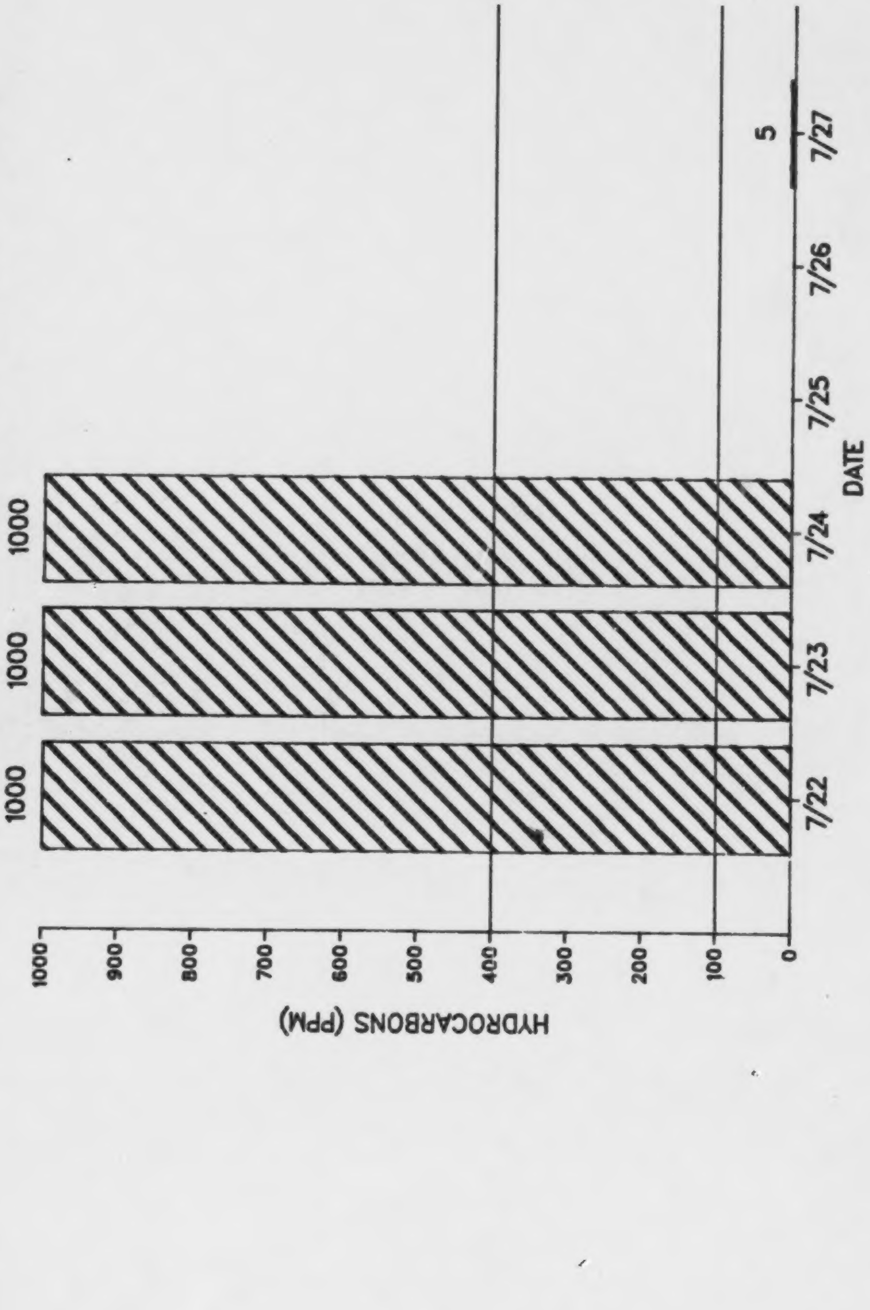


2715 MIRANDA — MAXIMUM OUTSIDE READING



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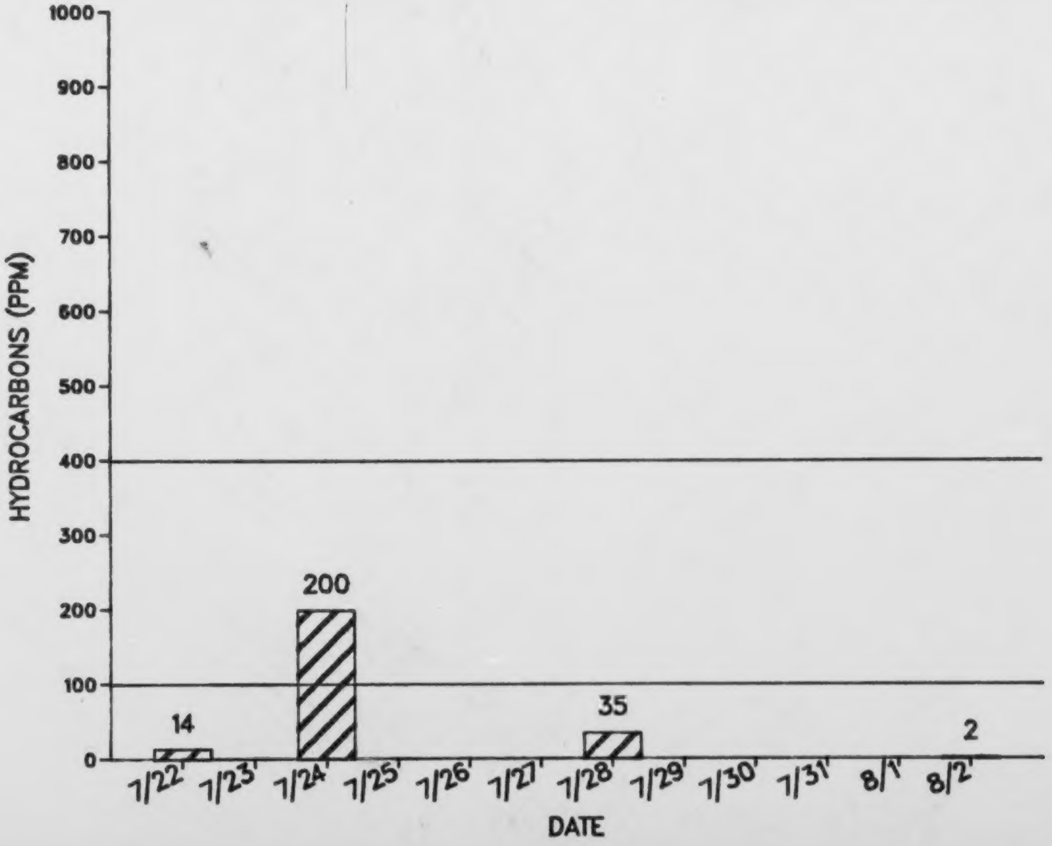

URGENT

United States
Environmental Protection
Agency

Regional Administrator
215 Fremont Street
San Francisco CA 94105

Region 9
Arizona, California
Hawaii, Nevada
Pacific Islands

EPA Environmental News

FOR IMMEDIATE RELEASE: Sunday, July 22, 1984

Contact: Terry Wilson
415/974-8083

EPA ISSUES ADMINISTRATIVE ORDER TO BKK LANDFILL

(San Francisco)--The U.S. Environmental Protection Agency (EPA) today announced issuance of an administrative order to BKK landfill of West Covina, California. The enforcement order was delivered to BKK officials on Saturday, July 21, 1984.

The order requires:

1) installation and operation of a gas migration control system at the landfill in the vicinity of the homes which have been evacuated. This system must be installed and in operation within three days of the receipt of the order.

2) BKK to provide suitable accomodations for the evacuated families and to reimburse the families for any expenses incurred as a result of the relocation.

3) BKK to develop a long-term plan to design and operate a comprehensive gas migration control system which would prevent the further migration of any landfill gases from the BKK facility.

4) BKK to install monitoring systems to confirm that the short-term and long-term measures are achieving the desired results.

This action is in response to the discovery of combustible and toxic gases found migrating into the neighborhood near the BKK landfill site.

EPA Regional Administrator Judith E. Ayres stated, "EPA, and our local and state conterparts, are acting in a timely fashion with this enforcement procedure to protect the public health and environment of citizens in the affected neighborhood. We shall have continuing surveillance of the affected areas."

The gases were first discovered late Tuesday afternoon during a check by the Southern California Gas Company. When initially reported to the city of the West Covina, the source of the gas was undetermined. A plan for the evacuation of nineteen homes was devised and completed.

Testing of the gases indicated the presence of methane. Vinyl chloride was also discovered in concentrations exceeding State air quality standards.

EPA is working with California Department of Health Services, the South Coast Air Quality Management District, and Los Angeles County Health Department, and West Covina city officials, as well as, the Coast Guard Pacific Strike Force to assess the extent of the methane and vinyl chloride gas leaks.

The task force established will conduct further testing of the evacuated homes. The task force will also conduct a general survey of an additional 150 homes adjacent to the landfill.

Health officials are unable, at this time, to predict when the residents of the evacuated homes will be able to return.

# # #

EPA

BY HAND DELIVERY

July 21, 1984 Refer to: Docket No. 84-13

Mr. Kenneth K. Kazarian
BKK Corporation
2550 - 237th Street
Torrance, CA 90510

Subject: Order Issued Under Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980.

Dear Mr. Kazarian:

Enclosed please find an Order issued under the authority of Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The Order is in response to the discovery earlier this week of landfill methane and other gases, including vinyl chloride, emanating from BKK Corporation's West Covina Facility into adjoining homes. The Order requires implementation of immediate, as well as long term, gas migration control systems, establishment of a monitoring program, and relocation of affected residents, among other actions.

The Order is effective upon receipt by you, and provides that you may request, within three (3) days after receipt of the Order, a conference with EPA to be held within seven (7) days of receipt of the Order. It also allows you to request an initial telephone conference to be held within three (3) days of receipt of the Order. Such requests should be made to Ann S. Nutt, Assistant Regional Counsel, (415) 974-8045.

Failure to comply with the terms of this order may result in the initiation of an action by EPA to enforce compliance pursuant to Sections 106(b) and 113(b) of CERCLA. Such failure may also subject BKK Corporation to civil penalties and/or punitive damages in an amount up to three times the amount of any costs incurred by the United States as a result of such failure.

We look forward to your cooperation in addressing and resolving the environmental problems which have arisen at the facility. For your information, attached is a copy of the press release that is being issued today in connection with this action.

Sincerely yours,

Judith E. Ayres

Judith E. Ayres
Regional Administrator

Enclosures

cc: Mr. Angelo Belomo, DOHS
Mr. Robert Ghirelli, RWQCB
The Honorable Esteban E. Torres, United States Congress
Mr. Charles Coffee, L.A. County DHS
Mr. Michael Miller, City of West Covina
Mr. Ed Camarena, SCAQMD

BEFORE THE UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

In the Matter of: BKK CORPORATION Respondent.	)	Docket No. 84-13
Proceeding under Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §9606	)	**ORDER**

This Administrative Order ("Order") is issued to the above-named Respondent by the United States Environmental Protection Agency ("EPA"), pursuant to Section 106(a) of the Comprehensive Environmental Response Compensation and Liability Act of 1980 ("CERCLA"), 42 U.S.C. §9606(a), by authority delegated to the undersigned by the Administrator of the United States Environmental Protection Agency. Notice of the issuance of this Order has been provided to the State of California.

FINDINGS OF FACT

1. Respondent is a California corporation which owns and operates a facility for the treatment, storage, or disposal of hazardous wastes ("the BKK Facility"), located at 2210 South

Azusa Avenue, West Covina, California 91792. For the purpose of this Order, the term "Facility" means the 583 acres of real property included in the legal description attached hereto as Attachment 1 and incorporated herein by reference.

2. The Facility is bordered on the south and west sides by residential development. On the southern side, homes are situated adjacent to the Facility boundary.

3. On December 22, 1980, the State of California Department of Health Services ("DOHS") issued an Interim Status Document ("ISD") for the BKK Facility pursuant to California Health and Safety Code Section 25200.5. This ISD has been amended since its issuance, including an amendment modifying Part X.4. of the ISD, issued on January 4, 1984.

4. On June 8 and 9, 1983, EPA and DOHS conducted a joint inspection of the BKK Facility. The EPA inspector alleged violations of various hazardous waste requirements contained in the ISD and in 40 CFR Part 265.

5. On or about August 1, 1983, Respondent submitted a RCRA Part B permit application to EPA pursuant to the Resource Conservation and Recovery Act ("RCRA") 42 USC 6901 et seq. The Part B application contained statements and analytical results which indicate contamination in a monitoring well beyond Barrier No. 1 at the BKK Facility.

6. On December 20, 1983, BKK and DOHS entered into an Agreement which requires, inter alia, that BKK perform certain tasks to study and improve conditions and operations at the BKK facility and that BKK pay $47,500.00 to DOHS "in recognition

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of the costs incurred by [DOHS] in providing BKK with onsite direction, evaluation, and planning assistance...."

7. On December 29, 1983, EPA issued a Determination of Violation, Compliance Order and Notice of Opportunity to Request a Hearing ("Complaint"), which charged BKK Corporation with violations of Chapter 6.5 of Division 20 of the California Health and Safety Code, which also incorporates the requirements of Subtitle C of RCRA, 42 USC 6921 et seq., by reference. On February 2, 1984, BKK moved for summary dismissal of the Complaint, which was granted on April 18, 1984 by Administrative Law Judge Spencer T. Nissen. EPA has appealed this dismissal and that appeal is pending.

8. On March 28, 1984, as part of a site characterization study, Respondent completed drilling a core hole, Boring C3, in the southeast area of Respondent's property approximately 100 feet from a residential area. The coring logs of Boring C3 indicate the presence of a sandy, water-bearing strata which may act as a conduit for migration of contaminated ground water and landfill gas from the area of the hazardous waste landfill.

9. On April 27, 1984, EPA and BKK entered into an Administrative Order on Consent pursuant to Section 3013 of RCRA, 42 U.S.C. 6934. This Order requires, inter alia, that BKK submit a proposal to EPA for the investigation, including monitoring, testing, analysis, and reporting of any hazardous waste migration from the BKK facility and to implement such proposal, upon approval by EPA. The BKK proposal was submitted on May 29, 1984. This proposal is under review by EPA and various State and local agencies at this date.

10. To date, Respondent has not completed: 1) a full hydrogeologic characterization of the facility; 2) a complete assessment of the nature and extent of contamination on site; and 3) a ground water monitoring system capable of detecting migration of hazardous waste from the facility.

11. Since June, 1981, the South Coast Air Quality Management District ("SCAQMD") has conducted ambient air quality monitoring on a regular basis at two (2) monitoring stations within the residential area near Respondent's facility. At the present time, five (5) stations are being monitored. From January through June, 1984, SCAQMD's monitoring has indicated twenty (20) incidences of exceedances in the California ambient air quality standard for vinyl chloride (10 parts per billion) at these off-site locations.

12. On July 17, 1984, the Southern California Gas Company detected methane gas at levels exceeding the Lower Explosive Limit (LEL) in the yards of residences on Lynn Court, Nanette Avenue and Leanna Drive in West Covina, California, adjacent to Respondent's facility. The LEL for methane, as provided in 40 CFR §257.3-8, is 5-15% methane in air. Levels recorded by the Southern California Gas Company ranged between 5-100% methane at the following addresses:

2307 Lynn Court
2322 Lynn Court
2041 Nanette Avenue
2401 Leanna Drive

13. In response to the discovery of methane gas described in paragraph 12, the City of West Covina, as a precautionary

measure, evacuated nineteen (19) homes on the evening of July 17, 1984 due to the risk of explosion from the methane gas. The four homes at which elevated levels of methane were detected were evacuated, as well as those homes between and adjacent to those homes.

14. On July 18, 1984, local and state agencies sampled air quality in two (2) of the 19 evacuated homes. SCAQMD's analytical results from these samples are as follows:

Address	Compound	Concentrations
2322 Lynn Court	Vinyl Chloride	500-990 ppb
	Benzene	120-1200 ppb
	Toluene	60-98 ppb
	Chloroform	7.4-8.3 ppb
	1,1,1 trichloro-ethane	6.3-9.1 ppb
	Carbon tetra-chloride	.49-.56 ppb
PCE	Trichloroethylene	10-71 ppb
TCE	Perchloroethylene	35-56 ppb
	Methane	.37-.77%
2041 Leanna Street	Vinyl Chloride	5-20 ppb
	Benzene	7-42 ppb
	Toluene	27-32 ppb
	1,1,1 trichloro-ethane	3.5 ppb
	Carbon tetra-chloride	.11-.12 ppb
	Trichloroethylene	.50-.58 ppb
	Perchloroethylene	8.9-9.2 ppb
	Methane	.17-.84%

15. Based on the findings in paragraph 14, seventeen (17) homes presently remain evacuated.

16. Vinyl chloride, Benzene, Toluene, Chloroform, 1,1,1-trichloroethane, Carbon tetrachloride, and Trichloroethylene are hazardous substances as defined in §101(14) of CERCLA.

17. Endangerment.

A. Population at Risk.

The population within approximately a one-mile radius from the center of the BKK Facility is estimated at 30-40,000 people. Residential development lies adjacent to the BKK Facility on the southern side of the landfill; there is some commerical development in that area as well. The nearest residences are adjacent to the landfill.

B. Exposure Pathway.

As of July 20, 1984, the contaminants addressed by this Order have been found as gases present in air and soil in and/or around nineteen homes adjacent to the BKK Facility. Gases present in soil will migrate from the soil into the air. Exposure to air contaminants results as people breath the air in and around any homes or businesses where the contaminants are present.

C. Health Effects.

(1) Methane: Methane has been detected in air samples taken from inside homes located adjacent to Respondent's facility. Methane is an asphyxiant gas which acts by excluding oxygen from the lungs. When levels of methane reaches a concentration of 50% or greater in air, marked symptoms can be produced. A concentration of 75% or greater is fatal within

minutes. Symptoms include emotional instability, nausea, vomiting, prostration, and loss of consiousness.

In addition, the lower explosive limit of methane is 5-15%. The lower explosive limit is defined as the lowest percent by volume of a mixture or explosive gases which will propagate a flame in air at 25°C and atmospheric pressure. 40 CFR §257.3-8(e)(5).

(2) Vinyl Chloride: Vinyl Chloride has been detected in both community air samples taken near the site and in air samples taken from inside homes located adjacent to Respondent's facility. When inhaled, vinyl chloride is rapidly absorbed through the lungs and enters the blood stream.

Occupational exposure studies have strongly implicated vinyl chloride as a human chemical carcinogen, manifesting itself in multiple tumor sites including the liver, brain and lungs. Other human health effects associated with chronic exposure include functional disturbances of the central nervous system, liver malfunction, and pulmonary insufficiency with restrictive changes in the lungs.

Studies have shown that vinyl chloride causes cancer in laboratory animals exposed to the substance by the inhalation route. The diseases manifested include angiosarcoma, sarcoma, and carcinomas in the liver and lungs.

In addition, studies indicate that low level exposure to vinyl chloride causes a number of congenital malfunctions in humans, including malformation of the central nervous system, upper alimentary tract and genital organs.

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Finally, the California Department of Health Services and the California Air Resources Board utilize a standard of 10 parts per billion (ppb) Vinyl Chloride, based on a 24 hour exposure period, for the ambient air quality standard. Levels measured inside homes in the sampling to date have been as high as 99 times this standard.

In adopting such a level, the comments incorporated in the regulation provide:

> Low-level effects are undefined, but are potentially serious. Level is not a threshold level and does not necessarily protect against harm. Level specified is lowest level at which violation can be reliably detected by the method specified. Ambient concentrations at or above the standard constitute an endangerment to the health of the public.

California Administrative Code, Title 17, Part III, Section 70200.5. (Emphasis added)

(3) Benzene, Toluene, Chloroform, 1,1,1 Trichloroethane, Carbon Tetrachloride, Trichloroethylene, and Perchloroethylene.

There may be cumulative effects of all of these substances, thus, the health effects of each of these substances should be considered.

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(a) Benzene. Benzene has been detected in samples taken in homes near the facility. Benzene acts as a narcotic on the central nervous system. Acute benzene poisoning commences with nausea, vomiting, ataxia, and excitement, followed by depression and coma. Death can occur because of respiratory or cardiac failure. Exposure can cause confusion, dizziness, fatigue, headache, nausea, and coma. There appears to be a correlation between benzene exposure and leukemia in humans.

(b) Toluene. Toluene has been detected in air samples taken in homes near the facility. Inhalation of toluene vapors may produce irritation of the upper respiratory tract, disturbance of vision, dizziness, nausea, collapse, and coma. Direct contact with skin and eyes causes burning. Exposure may cause headache, nausea, loss of appetite, lassitude, and impairment of coordination and reaction time. Higher concentrations may cause anemia, leucopenia and enlargement of the liver.

(c) Chloroform. Chloroform has been detected in air samples taken in homes near the Facility. Prolonged inhalation of chloroform will bring on paralysis accompanied by cardiac respiratory failure and finally death. Its use as an anesthetic has been abandoned due to its toxic effects. Inhalation of the concentrated chloroform vapor results in irritation of the mucous surfaces exposed to it. The narcosis is ordinarily preceded by a stage of excitation which is followed by loss of reflexes, sensation, and consciousness.

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has been detected in air samples taken in homes near the Facility. This substance causes a proarrhythmic activity which sensitizes the heart to epinephrine-induced arrhythmias. This sometimes will cause a cardiac arrest particularly when this material is massively inhaled as in drug abuse for euphoria.

(e) Carbon tetrachloride. Carbon tetrachloride has been detected in air samples taken in homes near the Facility. Carbon tetrachloride has a narcotic action resembling that of chloroform. Exposure to lower concentrations, insufficient to produce unconsciousness, usually results in severe gastrointestinal upset, and may progress to serious kidney and hepatic damage. Though the common form of poisoning following industrial exposure is usually one of gastrointestinal upset, which may be followed by renal damage, other cases have been reported in which the central nervous system has been affected. Prolonged exposure to small amounts of carbon tetrachloride has also been reported as causing cirrhosis of the liver.

(f) Trichloroethylene. Inhalation of high concentrations of trichloroethylene may cause narcosis and anesthesia. Prolonged inhalation of moderate concentrations causes headache and drowsiness. Acute exposure have been attributed to ventriculary dibrillation resulting in cardiac failure.

(g) Perchloroethylene. Toxic by inhalation, prolonged or repeated contact with the skin or mucous membrane, or when ingested by mouth. The liquid can cause injuries to the eyes. The symptoms of acute intoxication from this material are the result of its effects upon the nervous system.

Exposure may cause irritation, lachrymation and burning the eyes and irritation of the nose and throat. There may be vomiting, nausea, drowsiness, and an appearance resembling alcoholic intoxication. The material also acts as an anesthetic, through the inhalation of excessive amounts within a short time.

The material can cause dermatitis, particularly after repeated or prolonged contact with the skin. The dermatitis is preceded by a reddening and burning and more rarely, a blistering of the skin. Upon ingestion it causes iritation of the gastrointestinal tract, which, in turn, causes nausea, vomitting, diarrhea and bloody stools.

CONCLUSIONS OF LAW

1. The BKK facility is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. 9601(9).

2. Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. 9601(21).

3. Wastes disposed of at the site by Respondent include "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. 9601(14).

4. The past, present, and potential migration of hazardous substances from the facility into the air constitutes an actual and threatened "release" as defined in Section 101(22) of CERCLA, 42 U.S.C. 9061(22).

5. Respondent is a responsible party pursuant to §107(a)(1) of CERCLA, because it is the present owner and operator of the Facility and was the owner and operator of the Facility during the disposal of wastes at the Facility.

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6. The Respondent is liable for undertaking the response actions required by this Order.

DETERMINATIONS

Based upon the foregoing FINDINGS OF FACT and CONCLUSIONS OF LAW, EPA has determined that:

1. The actual and threatened release of hazardous substances from the facility may present an imminent and substantial endangerment to the public health, welfare, and the environment.

2. The response actions required by this Order are necessary to protect public health and welfare and the environment and the initiation of such actions will prevent or mitigate immediate significant risk of harm to human life or health or to the environment.

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ORDER

1. Immediate Landfill Gas Migration Control System. Within three (3) days of receipt of this Order, Respondent shall have completed installation and shall commence operation of a landfill gas migration control system to immediately prevent migration of landfill gas from Respondent's Facility in the south central portion of the Facility in the vicinity of Barrier 2. Within two (2) days of receipt of this Order, Respondent shall submit a detailed written description of the gas migration control system required by this paragraph. The gas migration control system shall be designed and operated so as to prevent all methane and any other gases whose source is Respondent's landfill ("landfill gases") from migrating off-site. The gas migration control system shall include the adequate destruction of all gases. Respondent shall have the burden of demonstrating compliance with this requirement.

2. Off-site Mitigation Measures. Mitigation measures shall also be immediately instituted so as to reduce the level of any landfill gases which may have already migrated off-site, or into residences and other structures in the vicinity of Respondent's Facility, to levels which are neither explosive nor an endangerment to human health, whichever is lower. Within five (5) days of receipt of this Order, Respondent shall submit a written description of these mitigation measures together with a timetable for their implementation. Respondent shall have the burden of demonstrating compliance with this requirement.

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3. Permanent Gas Migration Control System. Within forty-five (45) days of receipt of this Order, Respondent shall have completed installation and shall commence operation of a permanent gas mitigation control system capable of preventing the migration of any landfill gases from all portions of Respondent's Facility and adequately destroying all gases. Within fifteen (15) days of receipt of this Order, Respondent shall submit a detailed written description of such permanent gas migration control system.

4. Monitoring.

Respondent shall immediately implement a monitoring program. At a minimum, this program shall include:

(1) Monitoring probes.

a. within 14 days of the receipt of this Order, installation of monitoring probes shall be installed meeting the following specifications:

(1) Monitoring probes are to be located at points approximately midway between each pair of adjacent landfill gas migration control wells.

(2) At each location, multiple depth probes shall be installed. At a minimum, monitoring probes shall be installed at the following depths:

(i) One probe shall be located five (5) feet below the ground surface.

(ii) One probe shall be located at an elevation equivalent to the lowest elevation of the refuse deposited within 500 feet of the probe.

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(iii) One probe shall be located at an elevation of one-half the depth determined in item (ii) above.

(iv) One probe shall be located at an elevation of 1-1/2 times the depth determined in item (ii) above.

(v) Additional probes may be required as indicated by different soil types.

(3) In the event that a saturated zone is encountered in the drilling of these probes, data shall be gathered to determine the upper and lower limits of each such zone. If any of the probe depths determined above are within a saturated portion of the soil, probes will instead be installed 5 feet above and 10 feet below the limits of the saturated portion. These probes are to be designed such that any water which has run down the borehole can be removed prior to sampling.

(4) Clean gravel backfill shall be placed around each probe. This backfill shall extend from a minimum of 6 inches below to 1 foot above the probe.

(5) Seals between the probes at different depths shall be a minimum of 5 feet in length.

(6) Upon completion of the probes, field testing shall be conducted to demonstrate the effectiveness of the seals between probes.

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(7) Bore holes shall be logged by a registered geologist or engineering geologist. As-built installation data showing the location of the probes and seals, and materials used, shall be included on the logs. Boring logs for all probe holes shall be prepared and submitted to EPA.

b. Immediately upon installation of each monitoring probe, daily monitoring shall be initiated at that location. This monitoring shall include measurement of the following parameters at each probe:

- Static pressure in the probe at each depth.
- Methane concentrations and the concentrations of any other constituents as deemed necessary by EPA.

Monitoring shall also include measurement of the following parameters at each well head:

- Gas flow rate.
- Static pressure at each well head and static pressure in the main header at each well head.
- Methane concentrations at each extraction well and any other parameters deemed necessary by EPA.

c. Any monitoring data which indicates that the system is not functioning as required shall be submitted to EPA immediately. All other monitoring data shall be submitted in accordance with paragraph 8.

(2) Monitoring in and around Respondent's facility. Respondent shall immediately implement monitoring in and around the Facility including into residences and other structures located in the vicinity of Respondent's facility.

This monitoring shall consist of testing for any gas or gaseous constituent, the source of which may be Respondent's Facility. The gas or gaseous constituents to be monitored for shall include vinyl chloride, benzene, toluene and methane. This program shall immediately address the area described in paragraph 1, above, but shall also extend to other areas surrounding Respondent's Facility in order to identify other routes, if any, where landfill gases may have migrated or be migrating from Respondent's Facility; and

(3) Source testing of gas flares. Respondent shall conduct source testing of all gas flares to quantify the destruction efficiency level of all gases specified above in paragraph (2). In addition, identification of all detectable gases and full characterizaion and quantification of the gases released in the 10 highest concentrations. This testing shall initially be conducted within 30 days from the date of receipt of this Order and once a quarter thereafter. This data shall be submitted to EPA in accordance with paragraph 8.

Upon request, Respondent shall provide EPA with split samples of any samples collected on or off Respondent's Facility pursuant to this paragraph.

Within five (5) days of receipt of this Order, Respondent shall submit a written description of the monitoring program called for herein. The description shall specify the parameters to be monitored, sampling and analytical procedures, descriptions

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of monitoring instruments, and the frequency and locations of monitoring.

5. Temporary Relocation. Respondent shall immediately provide, at Respondent's expense, suitable accomodations for every family or person who has been ordered or urged by the City of West Covina ("City"), the State of California ("State"), or any department, agency, or branch of the City, State, or federal government to evacuate or otherwise temporarily leave their homes because of endangerment to persons and/or structures caused by Respondent's landfill gases, during such period of time that such persons or families are prohibited from or advised against returning to their home by any such governmental entity. "Suitable accomodations" means, at a minimum, safe, clean, habitable premises suitable for occupation by a family of the size which shall be occupying them. Respondent shall (1) locate and arrange for occupation of such accomodations, (2) provide for moving necessary personal belongings, including pets, into such accomodations, (3) provide for returning residents and belongings to evacuated homes, and (4) prevent against losses of any personal property suffered as a rocult of such evacuation or temporary abandonment of a residence.

6. Reimbursement of Costs. BKK shall immediately implement a program to reimburse any relocation expenses incurred by any person or family who has been ordered or urged to evacuate or temporarily leave their homes pursuant to the advice of any entity described in paragraph 5, above, because of the presence of Respondent's landfill gases in or around such homes. Within ten (10) days of receipt of this Order, Respondent shall submit

a written description of its program for carrying out such reimbursement. This program shall establish a method for Respondent's prompt payment (within 24 hours of claims) of or reimbursement for those expenses, including a provision for reimbursement of any public entity (including, but not limited to, the City) or private agency which has provided money, goods or services, including security services, to persons who have evacuated or abandoned their residences pursuant to the order or advice of any entity described in paragraph 5, above, because of the presence of Respondent's landfill gases in or around such homes.

For purposes of this paragraph, a person's or family's length of stay away from home shall be determined by when the public entity which ordered or advised abandonment of the home allows each person or family to return home, or no longer recommends against such return, or longer if there are special circumstances which may necessitate a person or family staying away longer (e.g. damage to home renders it uninhabitable; physician's certificate shows that family member(s) must stay away longer for health reasons).

7. Modifications. The written descriptions submitted by Respondent pursuant to paragraphs 1, 2, 3, 4, and 6 are subject to review by EPA, which shall consult with appropriate State and/or local agencies in conducting its review. EPA may order modification of the gas migration control systems described by Respondent pursuant to paragraphs 1, 2, and 3, the monitoring system described by Respondent pursuant to paragraph 4, and the reimbursement program to be submitted by Respondent pursuant to

paragraph 6 or make such other modifications as EPA may deem necessary to protect public health and welfare and/or the environment. Such modifications may be issued as amendments to this Order and shall be effective upon issuance.

8. Reporting. Respondent shall weekly provide EPA with written results of the monitoring activities carried out pursuant to Paragraph 4 of this Order, commencing one week after receipt of this Order. Respondent shall provide written progress reports to EPA, due on the fifth day of each month after the effective date of this Order, describing all activities undertaken pursuant to the Order in the previous month, and activities planned for the current and next coming months.

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9. Compliance with Applicable Laws. Respondent shall carry out this Order in compliance with all local, State, (including the ISD and any modifications to the ISD), and federal requirements, including requirements to obtain necessary permits and to assure worker safety. Gases collected by the Respondent's gas migration control system shall be destroyed in accordance with the requirements of the SCAQMD. Condensate produced from the gas migration control system shall be stored, treated and/or disposed of in accordance with State and local requirements. Any such requirements may be more stringent than those imposed pursuant to this order.

10. Project Coordinators. Within two (2) days of the effective date of this Order, Respondent shall designate, and provide EPA with the name and address of a Project Coordinator whose responsibilities will be to receive all notices, comments, approvals and other communications from EPA to Respondent.

11. Endangerment During Implementation. In the event that the Regional Administrator of EPA, Region 9, determines that any activities (whether pursued in implementation of or in noncompliance with this Order) or circumstances are creating an imminent and substantial endangerment to the health and welfare of people on the site or in the surrounding area or to the environment, the Regional Administrator of EPA, Region 9, may order Respondent to stop further implementation of this Order for such period of time as needed to abate the endangerment.

12. Incorporation of Documents. Any reports, plans, specifications, schedules and other documents required by the

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terms of this Order are, upon written approval by EPA, incorporated as a part of this Order.

13. Enforcement. Violation by the Respondent of this Order through failure to comply with any provision herein or otherwise shall be enforceable pursuant to Sections 106(b) and 113(b) of CERCLA, 42 U.S.C. 9606(b) and 9613(b).

12. Penalties for Noncompliance. Failure to comply may also subject Respondent to civil penalties and/or punitive damages in an amount up to three times the amount of any costs incurred by the United States as a result of such failure, as provided in Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. 9606(b) and 9607(c)(3). Nothing herein shall preclude EPA from taking such other actions as may be necessary to protect the public health and welfare or the environment and recovering the costs thereof.

13. Liability. Nothing herein shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current or future operations at the facility. Notwithstanding compliance with the terms of this Order, Respondents may be required to take further actions as are necessary to protect public health or welfare or the environemnt.

14. Performance. All response work performed pursuant to this Order shall be under the direction and supervision of a qualified professional engineer and/or certified geologist with

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expertise and experience in landfill gas collection, combustion and monitoring. Respondent shall, within three (3) days of receipt of this Order, provide EPA with the name(s) of such engineer(s) or geologist(s) and of any contractors and subcontractors to be used in carrying out the terms of this Order.

17. Quality Assurance. Respondent shall use quality assurance, quality control, and chain-of-custody procedures in accordance with EPA Guidance Document QAMS-005/80 throughout all activities. Respondent shall consult with EPA in planning for sampling and analysis. Respondent shall provide quality control reports to EPA and California Department of Health Services certifying that all activities have been performed, in accordance with paragraph 8 above.

18. Site Access. Access to the site shall be provided at all reasonable times to employees, contractors and consultants of EPA, California Department of Health Services, South Coast Air Quality Management District, Regional Water Quality Control Board, and California Waste Management Board and its designated local enforcement agency. Nothing in this paragraph is intended to limit in any way the right of entry or inspection that any such agency may otherwise have by operation of any law.

19. Government Liabilities. The United States shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by the Respondents, its employees, agents or contractors in carrying out activities pursuant to this Order, nor shall the Federal Government be held as a party to any contract entered into by the Respondent or its agents in carrying out activities pursuant to this Order.

20. Notice of Intent to Comply. Respondent shall inform EPA, in writing, within two (2) days after the effective date of this Order, of its intent to comply with the terms of the Order.

21. Notifications. All submittals and notifications to EPA pursuant to this Order shall be made to:

Director, Toxics and Waste Management Division
Environmental Protection Agency, Region 9
215 Fremont Street
San Francisco, CA 94105
Attn: Karen Schwinn (T-2-1)

Copies of all submittals and notifications shall be sent simultaneously to:

Angelo Bellomo
Toxic Substances Control Division
California Department of Health Services
107 S. Broadway, Room 7128
Los Angeles, CA 90012

Robert Ghirelli
Regional Water Quality Control Board
Los Angeles Region
107 South Broadway, Room 4027
Los Angeles, CA 90012

Charles Coffee
County of Los Angeles
Department of Health Services
313 North Figueroa Street
Los Angeles, California 90012

Ben Shaw
South Coast Air Quality Management District
9150 E. Fair Drive
El Monte, CA 91731

William Dennison
South Coast Air Quality Management District
Engineering Division
9150 E. Fair Drive
El Monte, CA 91731

Mike Miller
Environmental Services Director
City of West Covina
1444 West Garvey Avenue
West Covina, CA 91790

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All approvals and decisions of EPA made regarding such submittals and notifications shall be communicated to Respondent by the Director, Toxics and Waste Management Division, U.S. Environmental Protection Agency, Region 9. No informal advice, guidance, suggestions or comments by EPA regarding reports, plans specifications, schedules or any other writing submitted by Respondent shall be construed to relieve Respondent of its obligation to obtain such formal approvals as may be required herein.

22. On-Scene Coordinator. EPA shall appoint an On-Site Coordinator (OSC) who shall have authority to be on-site at all times when response work is being undertaken pursuant to this Order. The OSC shall have at least the authority to: (1) take samples or direct the type, quantity and location of samples to be taken by Respondents; (2) direct that the work in response to this Order stop for a period not to exceed 72 hours whenever the OSC determines that activities at the site may create an immediate and significant threat to public health or welfare or the environment; (3) observe, take photographs and make such other reports on the progress of the work as the OSC deems appropriate; (4) review records, files and documents relevant to the Order; and (5) to make or authorize minor field modifications in the studies, techniques, procedures or design utilized in carrying out this Order which are necessary to the completion of the project. The absence of the OSC from the site shall not be cause for stoppage of work. The OSC shall have the same authority as that vested in the "On-Scene Coordinator" by 40 CFR §300 et seq., published at 42 Fed. Reg. 31180 (July 16, 1982).

PARTIES BOUND

This Order shall apply to and be binding upon the Respondent, its officers, directors, agents employees, contractors, successors, and assigns.

EFFECTIVE DATE

This Order is effective upon receipt by Respondent, notwithstanding any conferences requested pursuant to Respondent's opportunity to confer, and all times for performance or response activities shall be calculated from that date.

SEVERABILITY

The requirements of this Order are severable, and Respondent shall comply with each and every provision hereof notwithstanding the effectiveness of any other provision.

OPPORTUNITY TO CONFER

Respondent may request, within three (3) days after receipt of this Order, a conference with EPA to be held within seven (7) days of the date of issuance to discuss this Order, including its applicability, the factual determinations upon which the Order is based, the appropriateness of any actions which the Respondents are ordered to take, or any other relevant and material issues or contentions which Respondent may have regarding this Order. Such request may be made by telephone, to be followed by written confirmation. Respondent may also request an initial telephone conference to be held within five (5) days after receipt of this order to discuss the above-referenced issues. Respondent may appear in person or by an

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attorney or other representative at any conference held at its request. Any request for a conference should be made to:

Ann S. Nutt
Assistant Regional Counsel
EPA, Region 9
215 Fremont Street
San Francisco, CA 94105
(415) 974-8045

Date of Issuance: 07/21/84 By: Judith E. Ayres

Judith E. Ayres
Regional Administrator
U.S. Environmental Protection
Agency
Region 9
215 Fremont Street
San Francisco, CA 94105

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca 94105

BY HAND DELIVERY

July 27, 1984

Refer to: Docket No. 84-15
(formerly 84-13)

Mr. Kenneth K. Kazarian
BKK Corporation
2550 - 237th Street
Torrance, CA 90510 .

Subject: Supplemental Order Issued Under Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980.

Dear Mr. Kazarian:

Enclosed please find a Supplemental Order issued under the authority of Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The Supplemental Order supplements the Order issued by the Environmental Protection Agency to BKK Corporation on July 21, 1984 in response to the discovery last week of landfill methane and other gases, including vinyl chloride, emanating from BKK Corporation's West Covina Facility into adjoining homes. The Supplemental Order requires expansion of the gas migration control system to additional areas where gas migration from the facility has been discovered, requires BKK to provide for laboratory analysis of certain samples taken by EPA, and clairifes certain requirements of the Order.

The Supplemental Order is effective upon receipt by you, and provides that you may request, within three (3) days after receipt of the Supplemental Order, a conference with EPA to be held within seven (7) days of receipt of the Supplemental Order. It also allows you to request within three (3) days an initial telephone conference to be held within five (5) days of receipt of the Supplemental Order. Such requests should be made to Ann S. Nutt, Assistant Regional Counsel, (415) 974-8045.

Failure to comply with the terms of this Supplemental Order may result in the initiation of an action by EPA to enforce compliance pursuant to Sections 106(b) and 113(b) of CERCLA. Such failure may also subject BKK

Corporation to civil penalties and/or punitive damages in an amount up to three times the amount of any costs incurred by the United States as a result of such failure.

I would like to convey to you our concern that the Order issued by EPA on July 21, 1984, as supplemented, be complied with in a timely fashion. In that connection, we are auditing your performance under the Order and intend to assess penalties for any delays or failures in compliance that might occur. Specifically, this letter serves to notify you that BKK failed to comply with paragraph 4 of the Order, in that BKK's written description of the monitoring program received by EPA on July 26, 1984 did not include a description of source testing of gas flares (paragraph 4(3)). Such description was required to be submitted to EPA on July 26, 1984, along with the descriptions of other aspects of the monitoring program. Our assessment of penalties for this and any other violations of the Order will be made after further review of BKK's performance under the Order.

If you have any questions concerning this First Supplemental Order or wish to request a conference, as provided herein, please contact Ann S. Nutt at (415) 974-8045.

Sincerely yours,

Charles W. Murray
for
Judith E. Ayres
Regional Administrator

Enclosures

cc: Mr. Angelo Belomo, DOHS
Mr. Robert Ghirelli, RWQCB
The Honorable Esteban E. Torres, United States Congress
Mr. Charles Coffee, L.A. County DHS
Mr. Michael Miller, City of West Covina
Mr. Ed Camarena, SCAQMD

BEFORE THE UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

In the Matter of: BKK CORPORATION Respondent. Proceeding under Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §9606	)	Docket No. 84-15 **FIRST SUPPLEMENTAL ORDER**

This First Supplemental Order is issued to the above-named Respondent by the United States Environmental Protection Agency ("EPA"), pursuant to Section 106(a) of the Comprehensive Environmental Response Compensation and Liability Act of 1980 ("CERCLA"), 42 U.S.C. §9606(a), by authority delegated to the undersigned by the Administrator of the United States Environmental Protection Agency. Notice of the issuance of this First Supplemental Order has been provided to the State of California.

FINDINGS OF FACT

1-17. Paragraphs 1 through 17 of Findings of Fact in the Order issued July 21, 1984 by EPA to Respondent, Docket No. 84-15

("Order"), are hereby incorporated by reference into this First Supplemental Order as if fully set forth herein.

18. On July 24, 1984, representatives from the Environmental Protection Agency obtained air samples from the residence at 2715 Miranda Street in West Covina, California. This residence is adjacent to the BKK Landfill and on the southeastern border. Four air samples were obtained, two within the home and two in the backyard. Samples were analyzed by the South Coast Air Quality Management District. The results were as follows:

Location	Compound	Concentration
backyard	Vinyl Chloride	180 ppm - 34 ppb
inside home	Vinyl Chloride	120 - 400 ppb

19. Based on the findings in paragraph 18, the residents at 2715 Miranda Street evacuated their home and presently remain evacuated.

20. On July 13, 1984, representatives of the California Regional Water Quality Control Board, Los Angeles Region ("Regional Board"), sampled a discharge from a seep located in a ravine east of the landfill boundary (on property owned by Respondent) and north of homes located at 2743 and 2745 Miranda Street. Results of laboratory analysis of these liquid samples, which were made available on July 26, 1984 show the presence of vinyl chloride and two isomers of dichloroethylene. Specifically, the laboratory analysis results show:

vinyl chloride	40ppb
1,1-dichloroethylene	2ppb
1,2-dichloroethylene	trace amounts

The Regional Board has determined that "this polluted wastestream is a result of landfill operations and threatens to cause pollution of waters of the State."

CONCLUSIONS OF LAW

1-6. Paragraphs 1 through 6 of Conclusions of Law set forth in the Order are hereby incorporated by reference into this First Supplemental Order.

7. The Respondent is liable for undertaking the response actions required by this First Supplemental Order.

DETERMINATIONS

Based upon the foregoing FINDINGS OF FACT and CONCLUSIONS OF LAW, EPA has determined that:

1. The actual and threatened release of hazardous substances from the facility may present an imminent and substantial endangerment to the public health, welfare, and the environment.

2. The response actions required by this First Supplemental Order are necessary to protect public health and welfare and the environment and the initiation of such actions will prevent or mitigate immediate significant risk of harm to human life or health or to the environment.

SUPPLEMENTAL ORDER

23. All requirements set forth in paragraphs 1 through 22 of the Order remain in effect without change, except as expressly set forth below.

24. Docket Number. The docket number of the Order issued on July 21, 1984, is hereby changed to Docket No. 84-15. This change is retroactive to and including July 21, 1984.

25. Submittals. Wherever it is required by the Order, as supplemented, that Respondent shall submit written descriptions, reports, or other documentation to EPA, the deadline imposed for any such submittal is the day on which EPA must receive the submittal. Failure to comply with any such requirement shall subject Respondent to penalties as set forth in paragraph 12 of the Order, incorporated herein.

26. Qualified Geologists. In paragraph 4(1)a(7) of the Order (page 16, line 1), the term "registered" is hereby changed to "qualified".

27. Supplemental Landfill Gas Migration Control System. Within three (3) days of receipt of this Order, Respondent shall have completed installation and shall commence operation of a landfill gas migration control system to immediately prevent migration of landfill gas from Respondent's Facility in the southeast portion of the Facility in the vicinity of 2715 Miranda Street. Within two (2) days of receipt of this Order, Respondent shall submit a detailed written description of the gas migration control system required by this paragraph. The gas migration control system shall be designed and operated so as to prevent all methane and any other gases whose source is Respondent's landfill ("landfill gases") from migrating off-site. The gas migration control system shall include the adequate destruction of all gases. Respondent shall have the burden of demonstrating compliance with this requirement.

28. Off-site Mitigation Measures. For purposes of clarification: application of the off-site mitigation measures required in paragraph 2 of the Order includes the general

vicinity of 2715 Miranda Street, adjacent to the southeast portion of Respondent's facility. A written description of these mitigation measures for this vicinity together with a timetable for their implementation shall be submitted by Respondent to EPA within five (5) days of receipt of this First Supplemental Order.

29. Monitoring. Within seven (7) days of the receipt of this Supplemental Order, Respondent shall have completed the installation of monitoring probes in the southeast portion of the Facility in the vicinity of 2715 Miranda Street pursuant to the specifications set forth in paragraph 4(1)(a) of the Order. Immediately upon installation, Respondent shall commence implementation of a monitoring program in that area as set forth in paragraph 4(1)(b) and (4)(1)(c) of the Order.

30. Laboratory Analysis. Respondent shall immediately provide, at Respondent's expense, for laboratory analysis of samples taken by EPA or its designated representatives in connection with EPA's investigation of landfill gas migration from the BKK Facility. Analysis shall be conducted by an EPA-approved laboratory. EPA shall be responsible for conveying the samples to be analyzed to the designated laboratory. Analytical results may be reported directly to Respondent; such results, however, shall be submitted in accordance with paragraph 8 of the Order to EPA and to those persons designated in paragraph 22 of the Order, or submitted earlier to EPA upon EPA's specific request for early submittal of such results.

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31. Elimination and Cleanup of Seeps.

(a) Respondent shall immediately take such steps as may be necessary to eliminate the contaminated seep located in the ravine east of the landfill boundary (on property owned by Respondent) and north of homes located at 2743 and 2745 Miranda Street, to cleanup and remove any waters and/or soil contaminated as a result of such seep, and to eliminate and cleanup any other contaminated seep on or around Respondent's Facility. Elimination and cleanup of the seep north of 2743 and 2745 Miranda Street shall be accomplished no later than August 15, 1984.

(b) On or before July 30, 1984, Respondent shall submit to EPA a detailed written description of a program to comply with paragraph 31(a), above, which shall include, at a minimum:

(1) Containment and removal of contaminated water and/or soil from the seep north of 2743 and 2745 Miranda Street or any other contaminated seep on or around Respondent's Facility; and

(2) Management and proper disposal of liquids and/or soils collected from the seep north of 2743 and 2745 Miranda Street or from any other contaminated seep on or around BKK's Facility.

PARTIES BOUND

This First Supplemental Order shall apply to and be binding upon the Respondent, its officers, directors, agents employees, contractors, successors, and assigns.

///

EFFECTIVE DATE

This First Supplemental Order is effective upon receipt by Respondent, notwithstanding any conferences requested pursuant to Respondent's opportunity to confer, and all times for performance or response activities shall be calculated from that date.

SEVERABILITY

The requirements of this First Supplemental Order are severable, and Respondent shall comply with each and every provision hereof notwithstanding the effectiveness of any other provision.

OPPORTUNITY TO CONFER

Respondent may request, within three (3) days after receipt of this First Supplemental Order, a conference with EPA to be held within seven (7) days of the date of issuance to discuss this First Supplemental Order, including its applicability, the factual determinations upon which the Supplemental Order is based, the appropriateness of any actions which the Respondents are ordered to take, or any other relevant and material issues or contentions which Respondent may have regarding this First Supplemental Order. This opportunity to confer applies only to this First Supplemental and not to the Order issued and served on July 21, 1984. Such request may be made by telephone, to be followed by written confirmation. Respondent may also, within three (3) days of receipt of this First Supplemental Order, request an initial telephone conference to be held within five (5) days after receipt of this First Supplemental Order to discuss the above-referenced issues. Respondent may appear in person or by an attorney or other representative at any conference held at its request. Any request for a conference should be made to:

Ann S. Nutt
Assistant Regional Counsel
EPA, Region 9
215 Fremont Street
San Francisco, CA 94105
(415) 974-8045

Date of Issuance: 7/27/84

By: Charles W. Murray
Judith E. Ayres
Regional Administrator
U.S. Environmental Protection Agency
Region 9
215 Fremont Street
San Francisco, CA 94105

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0 3 AUG 1984

BKK LANDFILL SITUATION

QUESTIONS/ANSWERS

1. (Q) How can you expect me to accept your evaluation of what is safe, when there is every indication that you really don't know?

(A) In the past there has been uncertainty about the values. We now have repeated measurements that give us some confidence in our understanding of the nature and extent of the gas migration. Typically, in these situations, we monitor over a time period and get a picture of concentrations. We then continue to check to determine this concentration range doesn't change. Before we would recommend that any house be re-occupied, we would determine that the range of concentrations, over a number of days, remained below the level considered not to cause illness among the general population.

2. (Q) Are they testing in my house?

(A) Yes. All evacuated houses have been tested at least five times over the past week. All the evacuated houses will be checked at least six more times over the next two weeks. All houses in the area will be checked over the next two months. If you have a special complaint, call the DOHS at (213) 620-2380 to arrange more immediate testing.

3. (Q) Can you assure me that the lives of my family will not be adversely altered as a result of the exposure to these chemicals?

(A) No, we cannot assure safety. We can say that the levels that have been measured are not thought to cause illness to the general population. If you have a special medical condition, you should consult your regular physician for the answer as to whether or not these chemicals, at the levels measured, may affect you adversely.

4. (Q) My family is ill, what should we do?

(A) You should follow up with your personal physician. Please also phone the report of your illness to the DOHS at (213) 620-2380. DOHS is tracking any patterns or unusual occurrences of illnesses. A public health-medical doctor will evaluate your report and follow up on the information.

5. (Q) Why hasn't the landfill been closed?

(A) The recent findings of landfill gas in and near the homes adjacent to the BKK landfill resulted in directives by government agencies to correct the problem by upgrading the gas collection system at the site. Landfill gas resulted from waste decomposition over a number of years; the organic gases which escaped were products of wastes placed quite some time ago. Therefore, it is much more likely that a gas collection system, as opposed to closure, would solve the problem quickly.

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6. (Q) Under what situations and when will the landfill be closed?

(A) Authority to close all or part of the BKK landfill is twofold.

With respect to air emission, it has been determined that the recent findings of landfill gas in the neighborhood may present an imminent and substantial endangerment. In our judgement the most appropriate initial remedy was an upgraded collection system. The question to be answered is whether that system is fully effective in eliminating the endangerment. If it isn't,closure in combination with other remedies will have to be considered. Closure alone will not be sufficient, however, as closure is at best, a long term, not a short term, solution. We anticipate having more complete information in the near future, about the effectiveness of the upgraded gas collection system. If it has not been fully effective we will consider other remedies including closure. But again, the remedy most likely to achieve short term results would be further improvements in the gas collection system.

The second type of authority to close the hazardous waste landfill is via the RCRA Permit Program. We have reviewed the permit application and found that it is inadequate to support the issuance of a RCRA Permit. The company has been so advised and has failed to document compliance with the permit regulations. A complete review of the permit situation is underway to determine whether the deficiencies are sufficient to warrant denial. If the facts so indicate, we will propose to deny the RCRA permit. This proposal triggers a public process during which the company and others may present information to either augment the original application or support denial. A final decision would then be made. Permit denial has the effect of closing the facility on the effective date of the denial.

7. (Q) Will it ever be completely safe?

(A) We cannot guarantee that anything is completely safe. All measures are being taken to assure that the material onsite (leachate and gas) will not move offsite to become a public health hazard.

8. (Q) If the lack of an alternate site is not a factor in the BKK closure decision, what other sites are available?

(A) Chemical Waste Management and Casmalia Resources, IT Imperial County, are the closest commercial hazardous waste land disposal sites and are viable alternative for hazardous waste. For certain hazardous waste treatment options are available; the largest one being BKK's treatment facility in Chula Vista. For municipal garbage, the Puent Hills facility is the closest alternative. The municipal garbage landfill capacity in the Los Angeles Basin will have to be augmented in the future, even with the BKK facility; and more quickly without the BKK facility. The decision to close BKK will not be made on the basis of an analysis of the alternative, rather it will be made based on the site itself as described above. Restrictions placed on the landfill and decisions by businesses have resulted in over a two-thirds reduction in hazardous waste in the past year.

0 3 AUG 1984

9. (Q) Why can't BKK be closed temporarily while the problems are assessed?

(A) This option is being considered. If the upgraded gas collection system is not fully effective and confirmed by data, we will reconsider closure and temporary closure as remedies to the problem. As stated above, closure is not anticipated to be an effective short term mitigation measure.

10. (Q) Have the improvements to the gas collection system been effective?

(A) The improved gas collection system consists of a new series of wells and pipes to collect underground gas which is generated by organic matter in the landfill. It has been effective in collecting gas by applying a negative pressure and sucking gas into the system and routing it to the flares to be burned. The system is monitored by a series of borings designed to detect whether gas is getting by the collection wells. Those monitoring systems indicate the system is working quite well in the Lynn Court area, but that more gas collection capacity is needed in the Miranda Street area. That additional capacity is being added right now. The regulatory agencies have established a criteria of 0.1% hydrocarbon as the standard in the monitoring holes. If that value is exceeded, new capacity is added.

11. (Q) Will the gas come back?

(A) The gas collection system is designed to prevent that. The monitoring system next to the gas collection system is designed to provide early warning that there is a break in the system's effectiveness. Gas collection capacity can be increased quickly. A release of limited duration would receive sufficient dilution to prevent health impacts.

12. (Q) What measures will be taken to protect the public if the landfill is closed?

(A) Gas collection and monitoring would have to continue for years after closure, as will groundwater monitoring. Removing contaminated groundwater from the site will also be required after closure until the contamination is eliminated. We will issue a Post Closure RCRA Permit to BKK to require the groundwater work. The State and local agencies will require the continued operation of the gas collection system and monitoring program.

13. (Q) If I decide not to move back in my house, will it be purchased from me at fair market value?

(A) The regulatory agencies expect to be able to recommend reoccupation of the homes following analysis of the complete data. If you choose not to re-occupy your home, there is no simple mechanism for your home to be bought from you. One recourse available is to litigate the matter, filing suit as you see fit.

14. (Q) If I decide not to move back in, will BKK pay for hotel expenses?

(A) The regulatory agencies will ensure that BKK pays for expenses for a reasonable period of time after the agencies recommend re-occupation.

15. (Q) Will BKK pay for cleaning of the home?

(A) The regulatory agencies will ensure that BKK pays for cleaning in any homes where vinyl chloride or other toxic chemicals were detected.

August 10, 1984

BKK LANDFILL SITUATION
QUESTIONS FROM 8/3/84 MEETING & ANSWERS

LANDFILL

1. Was past dumping at the landfill monitored?

The monitoring of specific wastes placed in the landfill improved dramatically in the late 1970's. At that time it became necessary for each generator of hazardous waste to fill out a manifest giving the contents of the shipment and send it to the State Department of Health Services (DOHS). Prior to that time the records are poorer, but total volumes are available.

2. Are any of the agencies monitoring the waste being dumped now?

DOHS and EPA inspect the hazardous waste disposal operation and issue enforcement orders when improvements are needed. The Regional Water Quality Control Board, the South Coast Air Quality Mangement District and the State Solid Waste Management Board through the County Health Department also conduct inspections to determine compliance with their requirements and have also issued enforcement orders in recent months.

3. Who keeps records on what is being dumped?

BKK is required to keep a copy of these records and to send a copy to the Sacramento office of DOHS.

4. Why was dumping moved closer to the homes?

BKK is permitted to dispose of waste within a defined boundary. In order to evenly raise the level of the landfill the disposal operation moves from one portion of the permitted area to another.

5. What kinds of hazards result from spills?

The hazardous waste going to the landfill is of many different types. The major danger from spills would be direct human contact. This can be avoided by the quick action of trained cleanup crews. The landfill no longer accepts highly volatile, reactive or ignitable waste greatly reducing the danger of injury from vapors or explosive reactions.

GAS/MONITORING

6. Why is the gas coming to these locations at this time?

Landfill gas is produced as organic matter in the landfill degrades over time. We do not know exactly why it occurred in the particular areas where it did. The areas where the problem was detected are, of course, extemely close to the landfill and we would expect any problem to be most dramatic immediately adjacent to the landfill.

7. What is the chance of the gas coming back?

A large number of gas collection wells and monitoring probes have been drilled since the problem was detected. This upgraded gas collection system is designed to prevent a reoccurrence of the gas problem. More work is needed in the Miranda Street area and the monitoring probe system must be expanded. Currently, however, the system is focused on the problem areas and does not follow the entire perimeter of the landfill. Additionally, the system needs further improvement in the Miranda Street area. Both of these projects need to be completed to reduce the chances of another incident to the maximum extent possible. The Miranda Street work will be done immediately, but completing the entire system will take some months.

8. What will the agencies do if this, or similar, situations arise again?

The upgraded collection system and monitoring system should prevent the problem from reoccurring. These systems represent the best methods we know of to control landfill gas. If the system is not fully effective more wells will have to be installed. The monitoring probe system is designed to detect a problem. BKK is under order to immediately install more wells if the monitoring detects a problem.

9. How can these probes detect problems that SCAQMD monitoring could not?

The previous monitoring of gas took place in outdoor (ambient) air and in water meter boxes in the ground. This monitoring would detect a gas problem major enough to affect one of those areas. Since the gas comes from the ground, a more direct way to measure for a problem is to monitor the gas in holes dug into the ground. This will detect a problem not severe enough to show up at the ambient air quality monitoring stations or in the water meter boxes. A second explanation is that the problem was very recent and therefore had not been detected by earlier monitoring. We cannot be sure which of these two situations was the factor in this case.

10. Who will redirect positioning of the probes?

As described above, more gas monitoring probes are needed in other areas of the landfill and more may be needed in the "problem" areas as time passes. The Solid Waste Management Board is the lead agency responsible for insuring the probes are properly located.

11. How can the gas be present one day and not the next?

The movement of landfill gas is not fully understood. However, the variation in the data at very low levels (below 100 ppm) does not reflect movement of gas from the landfill. At these low levels interference from other sources and the measuring devices are likely to account for the variation. The early very high gas readings have not reoccurred indicating that the gas collection system is correcting the problem.

GROUND WATER

12. Has the ground water been tested?

The ground water at the perimeter of the landfill has been monitored by approximately 20 wells. Not all of these wells are properly located and many new wells will be placed in the coming months.

13. Is the ground water contaminated?

Almost all of the wells just referenced are on BKK property and most show some contamination by organic chemicals. The extent to which these contaminants have or will move off BKK property is not known and is the main reason for digging many more wells over the coming months.

14. Is there vinyl chloride in the ground water?

Yes, vinyl chloride has been detected in a number of the referenced wells in the "parts per billion" range, and some in the "parts per million" range.

15. What is our source of drinking water?

Drinking water for the evacuated homes comes from wells a minimum of several miles from the landfill. The water supply system is periodically checked for contaminants and the water meets all standards. In addition, tap water in the immediate vicinity of the landfill has been checked to insure contaminats were not entering the pipes at individual homes. These tests were favorable as well.

REOCCUPATION

16. Who will make the decision on reoccupation?

The State Department of Health Services, the South Coast Air Quality Management District, the County Health Department, the City of West Covina, and the U.S. Environmental Protection Agency (EPA) are all involved in that decision. The State Department of Health Services and the EPA will make formal recommendations to the citizens.

17. When will the decisions be made on the safety of our homes?

We are making certain reoccupation recommendations today where the risk is low and at acceptable levels. For other homes more data will be needed in order to recommend reoccupation. Specifically, analyses of 5 samples will have to confirm low contaminant levels before reoccupation can be recommended. We cannot determine exactly when the analysis will be complete. Although we hope to complete it in several weeks, it is possible that some of the results may trigger further analysis.

18. Why would decisions on reoccupation be made on a house-by-house basis rather than as a group?

The original decision to evacuate was, for most homes, purely precautionary until the danger of explosion passed. For some of the houses there was and is the added concern that specific organic gases may present an exposure risk, aside and apart from the explosion risk. For those houses we will have to collect more chemical-specific analysis before we can assess the short term exposure risk properly.

19. What should you do if you want assistance understanding the data?

We would like to meet with each family to answer specific questions about the data. Patti Post (EPA) is scheduling a time with each family in the next few days. Please see her tonight (8/10), or she will contact you shortly.

20. If reoccupation is recommended, what alternatives does one have if one doesn't want to move back in?

If reoccupation is recommended, we will insure that BKK continues to pay living expenses until each family can carefully consider all options, which we feel should take a week. Following that, there is no certainty that BKK or government will pay for living expenses outside your home. You may want to consult an attorney. One alternative is to file suit against the landfill operator or others.

21. What about the depreciation of property values?

The only method currently available for you to recover property value losses is via lawsuit.

22. Who do you hold responsible years from now if you return to your home and problems arise in the future?

Each family will have to decide whether they will move back in based on the data, the recommendations of the agencies and any other factors they choose to consider. There is no guarantee

23. What costs will BKK pay for from now on?

In those cases where the agencies are no longer recommending evacuation, living expenses will be paid through a resonable period of transition (approximately one week), in order to allow for an orderly reoccupation. That should allow enough time for families to have their questions anwered.

In those cases where the agencies are recommending continued evacuation, living expenses will continue to be paid. Those families who desire to move into larger rental units may do so. The cost of moving necessary household goods to and from the rental units will be included. BKK will be required to pay these costs until reoccupation can be recommended. This may take several weeks or substantially longer depending on the analytic results.

24. What would your reaction be in you were in our position?

It is probably not possible for anyone except the evacuated families to fully understand how they feel.

25. Can arrangements be made to allow pregnant women to remain relocated until after a child is born?

The assumption contained in the reoccupation criteria are extremely conservative. There is no reason to believe that any significant short term health risk exists for pregnant women. For those homes where reoccupation is recommneded, all members of the family, including pregnant women, may reoccupy.

EXPENSES/REIMBURSEMENT

26. What is the procedure for reimbursement of expenditures by the City of West Covina?

Provide the receipts for your purchases to the Office of Emergency Services, Attention: Jennifer Williams, 1444 West Garvey, West Covina, CA 91790.

The receipts must include the date of purchase, the name of the store, and the item(s) that you purchased. If the actual receipt does not list that information, you must write it in on the receipt or on a separate sheet of paper that you have attached to the receipt.

27. How quickly will the City provide reimbursement?

The City is processing claims as quickly as possible. Each claim is reviewed on an item-by-item basis.

28. What is considered a "necessary" or "reasonable" purchase?

These are broad categories that are difficult to define. It would be helpful to the City if you would provide a justification or explanation of any purchase that may not be easily determined to be a "necessary" or "reasonable" purchase.

29. Who should I contact if I have questions about being reimbursed?

Contact the Office of Emergency Services at 962-8631, Extension 345.

HEALTH

30. What are the possible health effects of the chemicals being analyzed?

Vinyl Chloride: Repeated exposure at high concentrations has been shown to cause liver cancer. The substance also acts as a depressant to the central nervous s-stem. It acts as a skin irritant with direct contact.

Carbon Tetrachloride: Is a solvent for fats and oils. Direct contact causes skin irritation. Long term exposure results in central nervous system depression and liver and kidney damage. Alcohol (consumed) intensifies the effect.

1,1,1 Trichloroethane: Is irritating to skin on direct contact. It acts as a narcotic and depresses the central nervous system.

Chloroform: Is an anesthetic which in large doses can cause liver and kidney damage. Alcoholics have an intensified reaction to chloroform.

Trichloroethylene: Depresses the central nervous system. Its effect is intensified with alcohol consumption.

Perchloroethylene: On direct repeated contact can cause skin irritation. High concentrations are irritating to the eyes and nose and can cause central nervous system depression.

Benzene: In direct contact irritates the skin, eyes, and upper respiratory tract. Exposure to high concentrations results in central nervous system depression. Chronic exposure produces blood changes. Benzene is also a potential carcinogen.

Toulene: In direct contact may cause irritation of the skin, eyes, and upper respiratory tract. Exposure to high concentrations may cause central nervous system depression.

31. Who should be contacted for a medical examination?

A doctor who is Board Certified in Occupational Medicine would be most familiar with the effects of chemical exposure. Seven physicians with that speciality are listed in the Covina telephone directory under "Physicians and Surgeons, M.D. - Occupational Medicine."

32. Who will pay for a medical examination?

While we are exploring a means of providing this type of service at no expense to you, at this time no such program has been set up and you would have to pay for any examination or testing that you have done if it is not otherwise covered by your medical insurance.

33. Is there a guarantee your house will be safe in the future?

We cannot guarantee that anything is completely safe. All measures are being taken to assure that the material onsite (leachate and gas) will not move offsite to become a public health hazard. Further we are establishing a long-term monitoring network to give us an early indication of hazardous chemical contaminants which might be detected before they exceed the normal range expected for the Los Angeles Basin air.

34. What are the effects if these levels have been present for years?

Public health risk for a given chemical is determined by the concentration of the chemical and the duration of the exposure. As these values are not known, your community risk can only be estimated. Based on the limited data available, the measured levels would not be thought to be associated with an increased incidence of disease that would show up in a scientific sampling.

35. Can you become ill from inhaling methane gas?

Methane is a simple asphyxiant. It acts to displace oxygen. If the oxygen concentration falls below about 16%, a person may experience symptons due to lack of oxygen (light-headedness). Recovery is brought about by getting the person into fresh air and is almost instantaneous.

36. Is it possible that high levels of contaminants were present before they were discovered and for how long?

It is possible that some high levels of contaminants have been present and undetected in the past. There is some information on outside air monitoring over the past few years, but little is known as to the indoor air quality.

37. What should you do about current health problems, including those due to stress?

You should follow-up with your own personal physician, who is familiar with your health history. Please also phone the report of your illness to the DOHS at (213) 620-2380. DOHS is tracking any patterns or unusual occurrences of illnesses. A public health medical doctor will evaluate your report and follow-up on the information.

DATA

38. What about the AQMD studies over the last few years? What have the results shown?

Air Quality Management District (AQMD) and Air Resources Board (ARB) studies have shown for the Los Angeles Basin a pattern of concentration ranges for various hazardous chemicals and a pattern of concentrations around BKK . DOHS has evaluated the levels found around BKK in the three-month period July 19 - October 15, 1982 and concluded that, 1) The maximum possible excess cancer risk for populations in the vicinity of BKK was 5 cases/per hundred thousand (worst case scenario); and 2) When the population within one mile from the BKK property line was considered (about 7,700 people), with an exposure period of seven years, there should be no additional cases of cancer attributable to exposure from the BKK landfill during the lifetime of the population from exposure to date.

39. Why are some of the sampling values higher after the installation of the collection system?

Field surveys are done using instrumentation which reads approximate values rapidly. The surveyor records individual readings and the evaluation translates these into trends. The next phase is verification of field survey numbers by analyzing collected samples . There are a number of explanations for the variations in readings.

1. The instrument used to measure total hydrocarbons in the ambient air was a field survey instrument, the Organic Vapor Analyzer (OVA). This device gives a general reading and is calibrated to methane. Certain organic chemicals will read high (as compared to their true concentration value, which must be determined by laboratory analyses) and others will read low. If the combination of these gases changes, the OVA number will also change, even though the true concentrations may not vary much. That is why it is critical to verify the concentrations by collecting a sample and having it analyzed in a lab.

2. Depending upon how the instrument is set, readings in the range +/- 10 ppm may be at the lower detection level of the instrument - so these may be apparent variation rather than actual, significant variation. For this reason a large margin of safety is built in by establishing action levels well above the lower detection limits of the instrument.

3. In addition to the instrumentation, there are many variables which affect field measurements. In this particular survey program inside houses, and inside confined spaces, air circulation patterns (e.g. from people moving through a room, and from doors to confined spaces being opened and closed) change frequently, with a simultaneous change in instrument readings.

Other important variables include instrument utilization techniques of individual field personnel and reliability/consistency of the individual field instruments.

The combination of all these factors results in a range of concentrations which may appear different, but may actually be similar. The only way to distinguish among actual, specific values is through laboratory analysis of collected samples.

40. Do we have the technology to measure these chemicals and know what the situation is?

We have the technology to measure many hazardous chemicals at concentrations in the parts per billion range. For the chemicals identified in this landfill survey, the detection level and the analytical methodologies seem adequate. For extremely potent carcinogens or certain other toxicants, this detection levle may not be low enough and the methodologies may be unavailable.

41. Where is thn earlier data?

Additional data from time periods before July 23, 1984 and after July 28, 1984 is being distributed. As we learn new information, we will continue to make it available.

42. How soon can you go back home?

For certain of the homes we will propose reoccupation within the next few days. For other homes, which are of special concern because re-entry criteria have not been met, we must collect additional samples to determine the actual concentrations of contaminants over a period of time. Then we will compare these to the re-entry criteria.

BRIEF CHRONOLOGY
July 17 - 22, 1984
BKK LANDFILL VICINITY

On July 17, 1984, at approximately 3:00 P.M. employees of Southern California Gas Company discovered high concentrations of combustible gas while performing a routine check for gas leaks in the vicinity of Lynn Court and Nanette in West Covina.

Several public agencies became involved in the initial investigation and sampling conducted July 17th through July 22nd. The participating agencies included:

- Southern California Gas - tested for detection of explosive hazard.
- West Covina Fire Department - tested for detection of combustion and explosive hazard.
- Los Angeles County Health Department - tested for explosive hazard, hydrocarbons
- California Department of Health Services - tested for explosive hazard, hydrocarbons.
- U.S. Environmental Protection Agency - tested for explosive hazard, hydrocarbons.
- South Coast Air Quality Management District - tested for explosive hazard, hydrocarbons.

In general, the information initially obtained was in the nature of simple determinations of the presence or absence of potentially explosive levels of combustible gases.

The detection of potentially dangerous gas levels was sufficient to prompt an immediate evacuation. Actual, site-specific readings from that initial stage of investigation are not consistently available. Monitoring and sampling continued on the 18th through the 20th. A wide-scale residential survey was initiated on July 21st. If available, field notes, chronologies, and the data obtained by the various agencies (from the period July 17 through July 22) have been attached. As additional data is collected, you will be provided with the updates.

If you have any questions on this information, please contact Mel Knight or Harriet Tregoning of the California Department of Health Services at (213) 620-2380.

Attachment

Prepared by the L.A. County Health Department,
Solid Waste Management Program

July 17, 1984

At approximately 1500 hours, members of the Southern California Gas Company, were doing a routine check for gas leaks in the area of Lynn Court and Nanette in West Covina. While doing the check,they noticed high concentrations of combustible gas in the area and called the West Covina Fire Department. After being unable to determine the source of the gas, the City of West Covina called the State Department of Health Services, who in turn, called the Environmental Protection Agency, the County Health Department, and the Air Quality Management District, to notify them of the circumstances. Later in the afternoon, members of those agencies, plus representatives from B.K.K. Landfill, the West Covina Fire Department and the West Covina Police Department got together to discuss the incident. The Police Department devised a plan for evacuation of the area and a certain number of homes were evacuated at the recommedation of the State Department of Health Services. At this time,nineteen houses and an unknown number of persons have been evacuted from the area. The evacuation began at approximately 2035 hours and completed at approximately 2245 hours. The evacuees were taken to the Shadow Oak Community Center and from there were offered rooms at two local motels in the area. The Gas Company personnel have gone back out to the area to further test for concentrations of gas. The gas ranged in concentration from 4% to 98% late this afternoon and was described as odorless, but highly combustible. At 2300 hours, the gas appears to be dissipating from the area, however, as a precautionary measure, the residences will remain evacuated until approximately 1100 hours tomorrow morning, at which time the agencies involved will get together with the residents of the area and on a house by house basis, determine whether or not the level of gas has dissipated sufficiently to allow them back into their homes. The Southern California Gas Company denies that the gas/ is originating from any of their pipelines and at the present time the origination of the gas is undetermined.

Prepared by the L.A. County Health Department, Solid Waste Management Program

CURRENT STATUS July 19, 1984

Three locations on Nannette Street and Lynn Court were rechecked last night at about 10:30 p.m. Two of these locations were the sites where the highest reading were obtained earlier in the day. The results of this testing revealed readings at .25% to .8% of gas. Based on these very low readings, the homes were secured for the night.

At mid day today, representatives from the California Department of Health Services, County Department of Health Services, Air Quality Management District, the Southern California Gas Company and the City of West Covina will be testing the interior and exterior of the five homes that had the previous high readings. It is our plan to complete these tests and advise the homeowners of the results and when it may be possible to return to the homes.

Upon return to the homes, the residents can call B. T. Bohannan at the Southern California Gas Company (213) 961-0984) to light and adjust all pilots lights and gas fixtures in the homes.

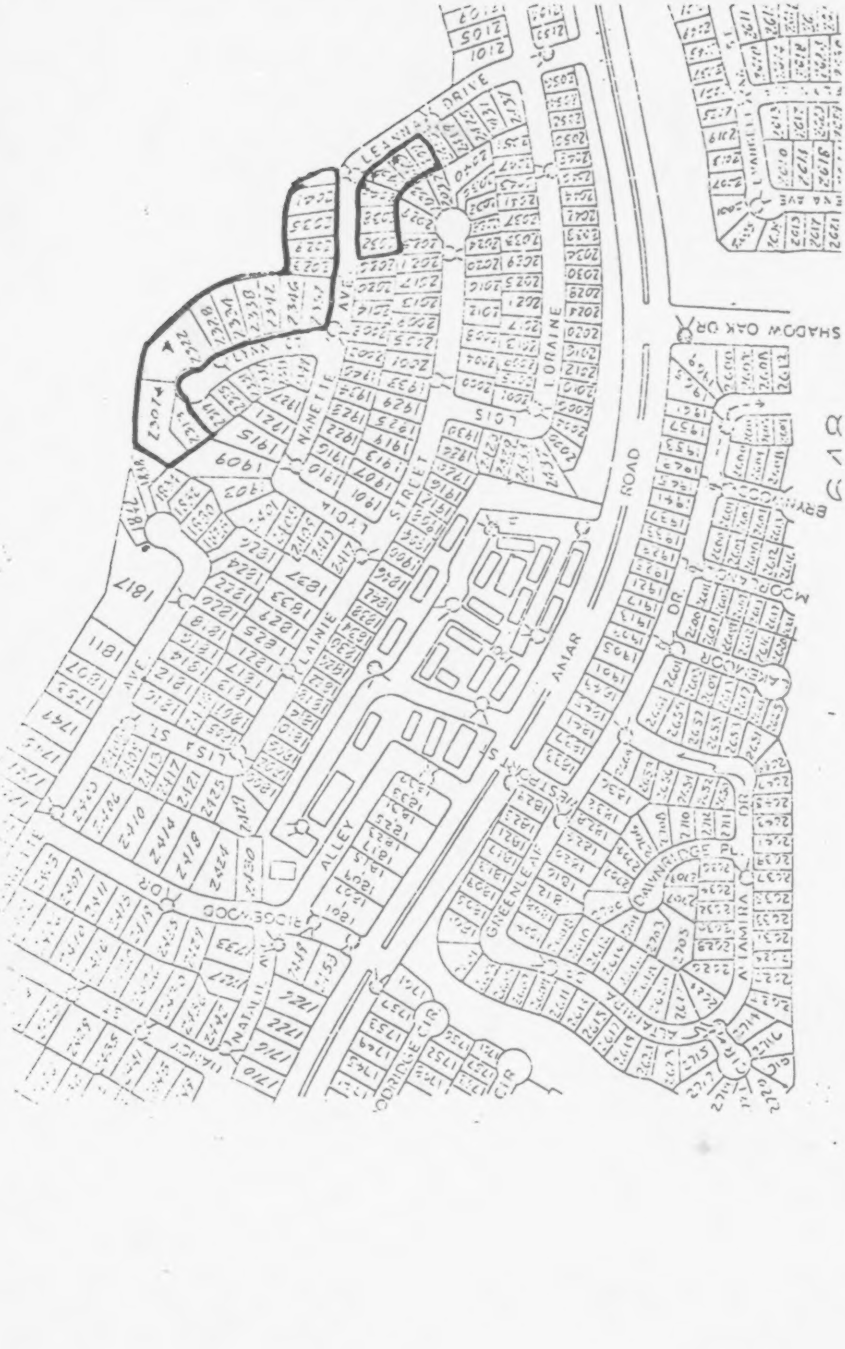
We will contact the homeowners as soon as we know when they can return to their homes. Please make sure we have a phone number where they can be reached.

Transcribed from the field notes of Chuck Coffee, L.A. County Health Dept.

July 17, 1984

2041 Leanna	
Outside, entry way (hole)	20% of the LEL *
2322 Lynn Court	
Sprinkler Hole	1% of the LEL
Meter Box	8% of the LEL
Inside, Under the Kitchen Sink	1.5% of the LEL
2307 Lynn Court	0%
(turned on power)	

* LEL = Lower Explosive Limit = 50,000 parts per million Methane.


LEANNA DRIVE
NANETTE AVE.
LORAINE
LOIS
LYDIA
STREET
LAINIE
AMAR ROAD
SHADOW OAK DR
MOORLAND
LAKEMOOR
DR.
LISA ST
AVE.
ALLEY
RIDGEWOOD DR
NATALIE
GREENLEAF
DAWNRIDGE PL.
ALTAMIRA DR
CIR

INVESTIGATIVE DATE TAKEN JULY 17 - 18, 1984, ON NANETTE AVENUE AND LYNN COURT, WEST COVINA

The following data was compiled on the evening of July 17, 1984, and beginning at 10:00 a.m. on July 18, 1984. Personnel involved in the survey were K. Downing, R. Ueshiro, and W. Tsuda of the L.A. County Hazardous Waste Control Program. Instruments used were Bacharach Model TLV Sniffers.

All results listed below are exterior readings and indicate maximum readings for the locations described.

RESULTS - JULY 17, 1984

2041 Nanette Avenue - 10:00 p.m.

Westside of House (Along foundation)	300 ppm *
Front Planter (Bore hole)	10,000 ppm

2322 Lynn Court - 11:00 p.m.

East Side of Garage (Crack in foundation)	2,000 ppm
East Side of House	800 ppm

RESULTS - JULY 18, 1984

2041 Nanette Avenue - 11:06 a.m.

West Side of House	400 - 1,500 ppm
West Side Walkway - Backyard	500 ppm
West Side under Walkway Slab	10,000 ppm

2322 Lynn Court - 12:25 p.m.

Water Meter Box	100 ppm
West SIde of House	300 ppm
East Side of House	200 ppm
East Side - Grassy Area, Rear	700 ppm

2307 Lynn Court - 1:20 p.m.

Total Exterior Perimeter	None Detected

6" Vent Pipe at End of Lynn Court - 1:45 p.m.

Exterior of Pipe	100 ppm

* All readings are expressed as Hexane.

Provided by the South Coast Air Quality Management District

ATTN: FILE
NAME BKK CORPORATION LANDFILL DATE 7/17/84
ADDRESS (premises) 2210 S. AZUSA AVE. CITY W. COVINA SECTOR
MAILING ADDRESS CITY ZIP
REASON FOR REPORT: C- B- VAR.- DENIAL- OTHER-
TYPE of contaminant: DUST ☐ ODOR ☐ FUMES ☐ SMOKE ☐ OTHER ☒ GAS MIGRATION
NAME OF REPORTING INSPECTOR (print) HUGH A. ROSE

Conclusions and recommendations:
LANDFILL GAS WAS FOUND AROUND RESIDENCES SOUTH OF BKK. 19 HOMES WERE EVACUATED

TIME FINDINGS IN CHRONOLOGICAL ORDER:

5:55AM 7-17-84 INSPECTOR ROSE WAS CALLED BY SUPERVISOR CAROL COY AND TOLD THAT SOUTHERN CALIFORNIA GAS HAD FOUND LEVELS OF "FIELD GAS" AROUND RESIDENCES NEAR BKK. THE LEVELS WERE REPORTED TO BE AS HIGH AS 100 PERCENT COMBUSTIBLES.

7:00AM INSPECTOR ROSE ARRIVED AT THE WEST COVINA CITY HALL AND MET WITH MIKE MILLER OF THE CITY. MR. MILLER EXPLAINED TO ~~TO~~ INSPECTOR ROSE THAT THE GAS COMPANY HAD FOUND COMBUSTIBLE GASES AROUND THE FOUNDATIONS OF SEVERAL HOMES NEAR BKK. THE PRELIMINARY FINDINGS WERE AS FOLLOWS:

2041 MANETTE - 100%
2044 MANETTE - 4%
2401 LEANNA - 4%
2322 LYNN CT. - 10%
2307 LYNN CT 5%

MR MILLER SAID THE GAS COMPANY HAD REPORTED THESE LEVELS AS PERCENTS TOTAL GAS NOT PERCENTAGES OF THE LOWER EXPLOSIVE LIMIT.

7:15PM INSPECTOR ROSE LEFT CITY HALL

7:20AM INSPECTOR ROSE ARRIVED AT 2041 MANETTE AND USED A TLV SNIFFER TO TAKE READINGS AROUND THE HOME. THE INSPECTOR FOUND AT VARIOUS POINTS AROUND THE

405467 (over)

(findings continued)

HOME THAT THE TOTAL HYDROCARBON MEASURED IN EXCESS OF TEN-THOUSAND PARTS PER MILLION (1%) WHICH IS THE UPPER LIMIT OF THE MACHINE.

THE LOCATIONS PROBED WHERE 2 FOOT DEEP BY ABOUT ONE HALF INCH WIDE HOLES IN A FRONT YARD PLANTER NEAR THE GARAGE. THE HOLE WAS MADE BY AN IMPACTOR BAR - A STANDARD GAS COMPANY TOOL.

INSPECTOR ROSE TOOK A READING INSIDE THE GARAGE AND FOUND LEVELS OF 10,200 PPM IN THE AIR.

AT THE REQUEST OF THE W. COVINA POLICE THE INSPECTOR WENT TO THE FIRE STATION NEARBY AND TALKED TO M. MILLER AND ANGELLO BELLOMO OF STATE HEALTH AND ART PETERSON OF THE GAS COMPANY.

MR. BELLOMO WAS TOLD OF THE INSPECTORS FINDINGS AND THE INSPECTOR WAS ASKED HIS OPINION AS TO THE ORIGIN OF THE GAS AND THE POTENTIAL FOR ~~[illegible]~~ EXPLOSION. INSPECTOR ROSE SAID THAT THE INDICATION WAS THAT BKK WAS THE SOURCE OF THE GAS BECAUSE THE GAS COMPANY HAD NOT FOUND HELIUM IN THE GAS WHICH

PERSONS CONTACTED:

NAME TITLE ADDRESS

PECTORS SIGNATURE Hugh A. Rose DATE 7-19-84

IEWED BY TITLE DATE

ATTN: FILE

AME BKK CORP. LANDFILL (CONT'D) DATE

DDRESS (premises) 2210 S. AZUSA AVE CITY W. COVINA SECTOR

AILING ADDRESS CITY ZIP

ASON FOR REPORT: C- B- VAR.- DENIAL- OTHER-

YPE of contaminant: DUST ☐ ODOR ☐ FUMES ☐ SMOKE ☐ OTHER ☒ GAS MIGRATION

AME OF REPORTING INSPECTOR (print) HUGH A. ROSE

nclusions and recommendations:

IME FINDINGS IN CHRONOLOGICAL ORDER:

IS PRESENT IN SCG GAS AS A TRACER AT LEVELS OF ABOUT 160 PPM.

THE INSPECTOR SAID HE COULDN'T COMMENT ON THE EXPLOSIVE NATURE OF THE GASES BECAUSE HIS DETECTOR ONLY READ TO 1% NOT 4.5% WHICH IS THE LEL.

MR. BELLOMO MADE THE DECISION TO EVACUATE THE HOMES WHERE THE GASES WERE FOUND AND THEIR NEIGHBORS.

30pm INSPECTOR ROSE CALLED EDWARD CAMARENA AT HOME AND TOLD HIM OF THE ACTIVITY GOING ON IN W. COVINA

0pm INSPECTOR ROSE RETURNED TO THE LENA CT. AREA AND WITH REPRESENTATIVES OF STATE & COUNTY HEALTH AND W. COVINA PERFORMED SOME MONITORING OF GAS LEVELS IN THE GROUND. THE PREVIOUS HOMES LISTED ~~ABOVE~~ WERE THE ONLY ONES FOUND WITH GAS IN THE GROUND

BY THIS TIME OF THE EVENING THE LEVELS OF GAS HAD DROPPED IN THE PREVIOUSLY PUNCHED HOLES FROM OVER 10,000 PPM TO 6-7000 PPM. THIS MAY BE DUE TO OUT GASSING WITHOUT ~~ANY GAS PRESSURE~~ VERY MUCH GAS PRESSURE FOR REPLACING THE GAS.

AT NO TIME THAT NIGHT DID ANYONE, TO THIS INSPECTORS KNOWLEDGE,

467 (over)

(findings continued)

FIND GAS LEVELS WITH AN EXPLOSIMETER GREATER THAN ABOUT 1.2 %. (12000 PPM).

:30pm INSPECTOR ROSE LEFT WHILE THE RESIDENTS WERE BEING EVACUATED.

00 PM -18-84 INSPECTOR ROSE ARRIVED AT 2041 MANETTE ~~A~~ WITH 10-L BAGS SAMPLE PUMPS AND BATTERIES, OVA EVACUATED FLASKS AND RESPIRATORY PROTECTION.

THE INSPECTOR FOUND LEVELS OF 200 PPM WITH AN OVA INSIDE 2041 MANETTE THE INSPECTOR PULLED A 10-L BAG SAMPLE AT JUST INSIDE THE FRONT DOOR AND ANOTHER ONE UNDER THE FRONT BATHROOM SINK WHERE OVA READINGS OF 1000-1200 PPM WERE FOUND.

INSPECTOR ROSE ALSO COLLECTED FLASK AND BAG SAMPLES UNDER THE KITCHEN SINK OF 2322 LYNN CT. READINGS IN THE AMBIENT LIVING ROOM WHERE ABOUT 1500 PPM BY OVA AND OVER 10,000 PPM UNDER THE KITCHEN SINK. RESPIRATORY PROTECTION SELF CONTAINED AIR WAS USED AFTER INITIAL ENTRY TO THIS HOME.

PERSONS CONTACTED:

NAME TITLE ADDRESS

ECTORS SIGNATURE Hugh A. Rose DATE 7-19-84

EWED BY TITLE DATE

Hydrocarbon Data Summary
7/21/84 - 8/3/84

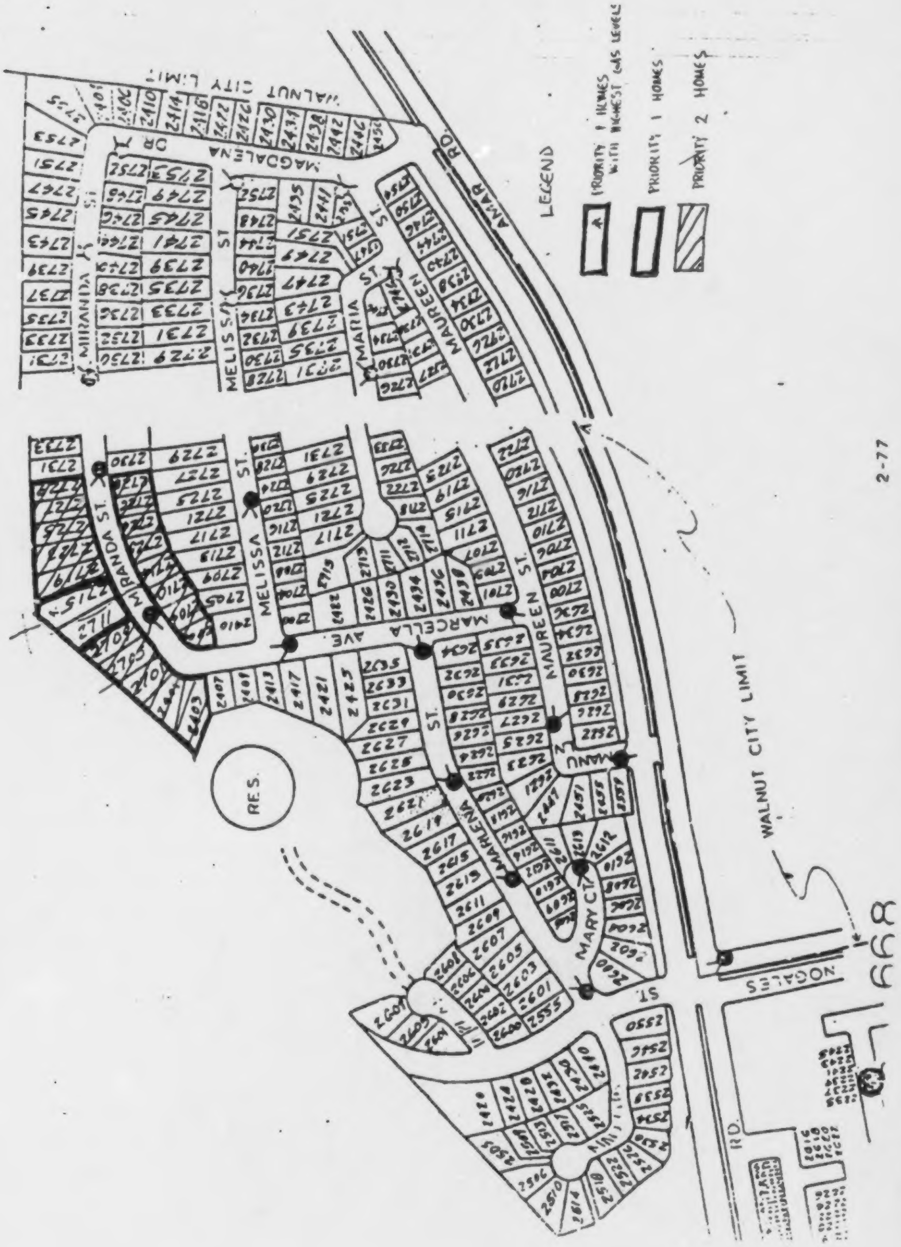
Attached is a two page summary of hydrocarbon data associated with the evacuated homes in West Covina. The readings shown are the highest value on the date indicated as read by an OVA (Organic Vapor Analyzer). The data measure hydrocarbons and is expressed as parts per million (ppm) of methane. The first sheet is on the interior of the home and the second one in the yard. Blank boxes indicate that no reading was taken for that day.

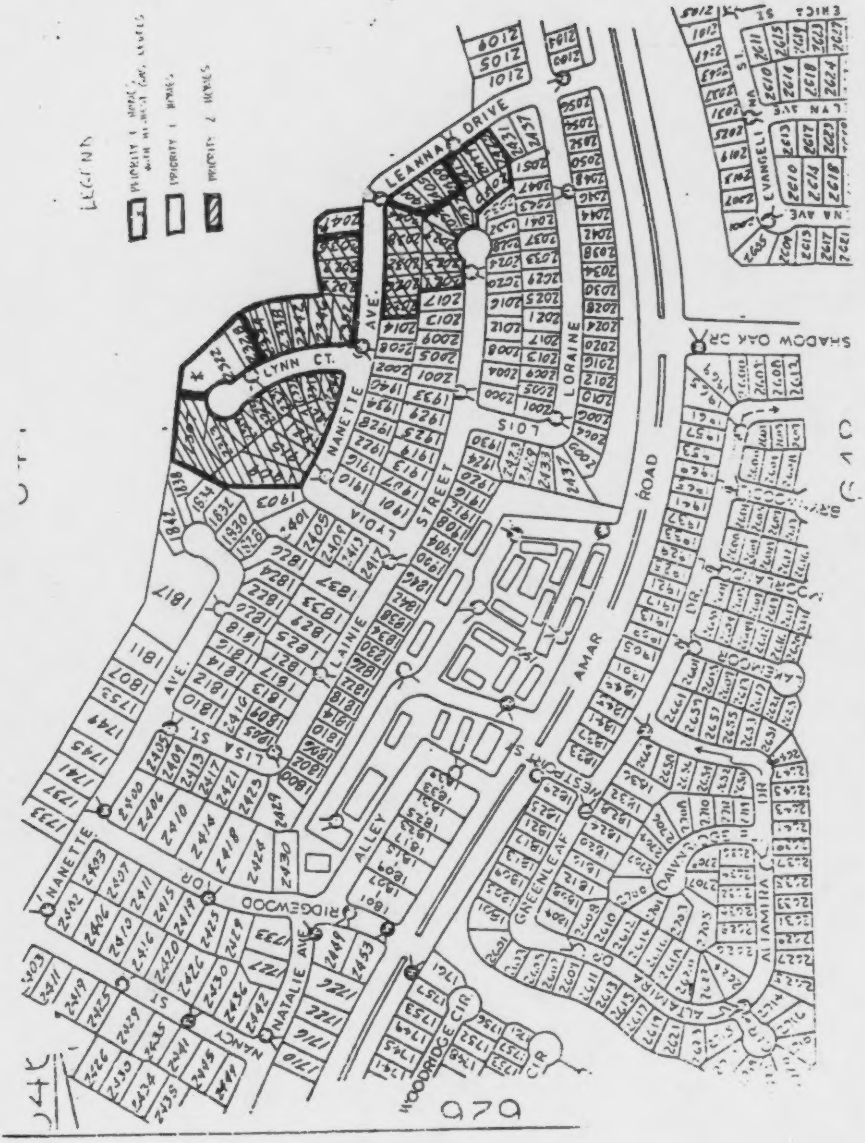
										10	11	12	13	14
	7-21	7-22	7-23	7-24	7-25	7-26	7-27	7-28	7-29	7-30	7-31	8-1	8-2	8
2322 LYNN COURT	2	>1000	42	2.4	4.4			3.6					5	
2328 LYNN COURT	>1000	>1000	135	240	18			3.8					5	
2334 LYNN COURT	10	3.4	4	10	2.2	30	20						4	
2338 LYNN COURT	10	3.2		46	13	48		10					5	
2342 LYNN COURT	7	2.2	3.4	45	18	60		10					6	
2346 LYNN COURT	6.[illegible]	2	2.9	17	14	30		5					4	
2352 LYNN COURT	10	1.6	2.8	[redacted]	7.4 [redacted]	57		15					10	
2023 NANETTE	10	1.5	3.2	19	11	39		9					4	
2029 NANETTE	11	7.2 [redacted]	3.4	12	3.5	24		6					5.4	6
2032 NANETTE	1.4	1.6	2.8	23	12	35		10					4.6	
2035 NANETTE	12	2.3	3.4	32	18	50		12				[redacted]	5.8 [redacted]	
2038 NANETTE	1.4	1.5	2.2	30	11	35		10				3.5	5.6	
2041 NANETTE	>100	600	19C [redacted]	260	52	59							6.2	
2044 NANETTE	1.0	4.2												
2401 LEANNA DRIVE	1.0	4	4.4	26	13	31		7.5				4	6.6	
2403 LEANNA DRIVE	1.0	5												
2409 LEANNA DRIVE	1.0	17	3.8	17	9.3	26		7.5				4.5	8.2	
2711 MIRANDA ~~DRIVE~~		4.6												
2715 MIRANDA ~~DR~~		14		200				35					20	

	7-21	7-22	7-23	7-24	7-25	7-26	7-27	7-28	7-29	7-30	7-31	8-1	8-2	8-3
2322 LYNN COURT	>1000	14	20	11	3								4	
2328 LYNN COURT	>1000	1.6	16	27	7.9								3.8	
2334 LYNN COURT	9	1.6	10	4	.8	3							3.6	
2338 LYNN COURT	9	2.6		34	6.8	4.6								
2342 LYNN COURT	6	2	1	4	.6	12							3.6	
2346 LYNN COURT	6.4	1.8	1.1	4	3.2	1.7							3	
2352 LYNN COURT	10	1.6	1.2	[illegible]	3.3	1.3							4	
2023 NANETTE	6	1	1	17	9	1.2							2.8	
2029 NANETTE	5.9	1.2	1	5.8	1.8	1.5							3.4	
2032 NANETTE	1	.6	1.4	6.5	6.6	2							2.8	
2035 NANETTE	100	20	1.1	27	2.8	4.2							4.4	
2038 NANETTE	1.8	1.2	1.6	2.8	7.4	3.8							4.2	
2041 NANETTE	40	>1000	>1000	40	20	6.6							2.4	
2044 NANETTE	1	1												
2101 LEANNA DRIVE	1	1	1.9	20	8	12							6.5	
2105 LEONNA DRIVE	1	.7												
2109 LEANNA DRIVE	1	2	4.6	14	6.2	2.8							5.2	
2711 MIRANDA		>1000	24	* 1900									.8	
2715 MIRANDA		>1000	>1000	>1000				5.						

* dirty tube

APPENDIX B.—MAPS AND LIST OF ADDRESSES


LEGEND
A PRIORITY 1 HOMES WITH HIGHEST GAS LEVELS
PRIORITY 1 HOMES
PRIORITY 2 HOMES
WALNUT CITY LIMIT
MAGDALENA DR
MIRANDA ST.
MELISSA ST.
MARIA ST.
MAUREEN ST.
AMAR RD.
MARCELLA AVE
MAHLENA ST.
MARY CT.
MANU
NOGALES ST.
RD.
RES.
WALNUT CITY LIMIT
2-77
899


LEGEND
PRIORITY 1 HOMES
PRIORITY 2 HOMES
LEANNA DRIVE
LYNN CT.
NANETTE AVE.
LYDIA STREET
LOIS
LORAINE
AMAR ROAD
SHADOW OAK DR
LAINIE
LISA ST.
AVE.
NANETTE
RIDGEWOOD DR
ALLEY
NATALIE AVE
NANCY ST
WESTPORT ST
GREENLEAF
WOODRIDGE CIR
ALTAMIRA
LAKEMOOR DR
EVANGELINA AVE
ERIC ST

BKK LANDFILL MONITORING PROGRAM

PRIORITY 1 HOMES

2322 Lynn Ct. +
2328 Lynn Ct.
2041 Nanette +
2401 Leanna Dr.
2405 Leanna
2409 Leanna
2711 Miranda
2715 Miranda +

CONTROL HOME:

PRIORITY 2 HOMES

Nanette	Lynn Ct.	Lainie	Miranda	Marcella	Leanna Dr.
1909	2307	2021	2700	2401	2413
1915	2313	2025	2701	2403	2419
1921	2319	2029	2704		2425
1927	2325	2033	2705		
2020	2331	2037	2709		
2023 *	2334 *	2040	2710		
2026	2337		2714		
2029 *	2338 *		2719		
2032 **	2342 *		2720		
2035 *	2343		2723		
2038 **	2346 *		2724		
2044 **	2349		2725		
	2352 *		2726		
			2727		
			2728		
			2729		

CONTROL HOMES: 1.
2.

+ = "HOT SPOT"
* = evacuated, but reoccupation acceptable
** = evacuated, but need 1 more sample to determine possibility of reoccupation

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, Govern

DEPARTMENT OF HEALTH SERVICES
107 SOUTH BROADWAY, ROOM 7128
LOS ANGELES, CA 90012
(213) 620-2380

August 14, 1984

Dear Resident:

This letter will introduce SCS Engineers, consultants for the BKK Interagency Steering Committee consisting of the California Department of Health Services, Air Resources Board, California Waste Management Board, South Coast Air Quality Management District, California Regional Water Quality Control Board, U.S. Environmental Protection Agency, Los Angeles County Department of Health Services, and the City of West Covina.

SCS Engineers will be conducting a detailed monitoring program for any landfill gases in and around your home for the next few months. In order for SCS to obtain thorough, accurate information, we ask for your cooperation by allowing them to enter your property. California Department of Health Services (DOHS) staff will be working with SCS Engineers in your community and will be available to discuss any questions you may have.

The DOHS staff in West Covina may be contacted through the West Covina Office of Emergency Services at (818) 962-8631. You may also call this office at (213) 620-2380.

Results of the survey will be available to you upon request.

Sincerely,

Nestor Acedera, Manager
Site Mitigation Unit
Southern California Section
Toxic Substances Control Division

Extended Monitoring Program Plan

Objectives: Confirmation of initial monitoring results
Observation of long-term variations of contaminant levels
Prediction of landfill gas migration and its control

Data Collection Procedures:
Screening of homes in entire area surrounding landfill
Ambient air screening around homes in entire area
Offsite soil probes to monitor gas
Onsite soil probes and gas collection wells
Meteorological data collection

Activity Phases:

Community Monitoring

Shallow soil probes will be located at various points within the community and will be monitored weekly for one month. Depending upon the findings, subsequent monitoring will be determined.

In Home Monitoring

All homes within the area around the landfill will be surveyed, using established procedures. For any homes in which elevated readings are found (hydrocarbon gas in excess of 100 ppm), at least five samples will be collected and analyzed for specific constituents, the concentrations of which will be compared to the normal concentrations for the L.A. area.

Areas of Special Concern

All homes within 500 feet of identified gas seepage (hydrocarbon gas in excess of 100 ppm) will have a series of samples collected for special laboratory analyses, as described in the previous paragraph. Continuous monitoring will be done in at least some of these homes.

Gas Migration/Gas Collection

Soil probes around the perimeter of the site will be monitored. Continuous records will be maintained of the operation of the gas collection system.

(8/10/84)

DRAFT

EXTENDED MONITORING PROGRAM PLAN

AUGUST 14, 1984

I. Priority 1 Home - In Home Monitoring

- Include 8 homes and 1 control
- 24-hour Tedlar bag samples at each home, 2 samples per week for 3 weeks
- Samples to be analyzed for the following constitutents:

  Methane
  Vinyl Chloride
  Benzene
  Chloroform
  1,1 Dichloroethylene
  Ethylene dibromide
  1,1,1 Trichloroethane
  Carbon tetrachloride
  Trichloroethylene
  Perchloroethylene
  1,2 Dichloroethylene

- 24-hour continuous monitoring for total hydrocarbons using Fisher Fume Alert or an appropriate substitute
- QA/QC - 10% Field Duplicate + Blank (not on control home) follow DHS protocol

  Additional 10% field duplicate by an independent laboratory

- Chain of Custody Procedures

II. Priority 2 Homes - In-Home Monitoring

- Include 52 homes and 2 control
- 24-hour bag samples at each home 3 samples per week for 2 weeks (Samples are to be taken in breathing zone of commonly used living area)

  Alt. Proposals:
  1) Use passive dosimeters
  2) At 10% of homes use charcoal tubes (or see SCS proposal)
  3) Extend time frame from 2-3 weeks

- Samples to be analyzed for vinyl chloride (if bag sample, analyze for methane and carbon dioxide)
- QA/QC - 10% field duplicate + blanks (not on control homes) follow DHS protocol
- At each home, total HC readings are to be taken utilizing an OVA.
  1) The 24-hour sample shall be speciated for constituents listed in Priority 1 homes.
  2) 5 OVA readings in 4 time zones
  3) Additional grab samples will be required.

III. Exterior Monitoring (Priority 1 and 2 homes and Offsite Probes)

- Include 60 homes and 3 control

  At each home an 18-inch temporary probe shall be installed at one of the following locations, in order of priority, following an OVA scan of the yard.

  1. A feasible location close to the highest outside OVA reading.
  2. A feasible location near the BKK landfill boundary.

- Each temporary probe is to be monitoried daily (by OVA). Each permanent monitoring probe to be monitored three times a day by OVA. If OVA reading is >1000 ppm:

  1. One grab sample pnr week will be collected.
  2. Sampling will be taken in a Tedlar bag, pumped slowly.
  3. Sample will be analyzed for all constituents in the Priority 1 list.
  4. QA/QC will follow DHS protocol.

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY
GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
107 SOUTH BROADWAY, ROOM
LOS ANGELES, CA 90012

August 14, 1984

Robert P. Stearns
SCS Engineers
4014 Long Beach Blvd.
Long Beach, CA 90807

Dear Mr. Stearns:

This letter documents discussions in the August 13 meeting concerning the extended monitoring program at the BKK landfill, and informs you of decisions which have been made on the proposed alternatives to the original workplan. It also serves as a directive to immediately proceed with the monitoring of the Priority 1 homes. This monitoring should begin no later than August 15, 1984, and be fully implemented by August 17, 1984.

Modifications and further clarifications to the plan since the draft was given at the August 13 meeting, are as follows:

- 24-hour composite Tedlar bag samples are to be taken at all eight Priority 1 homes and a control home and analyzed for the eleven compounds given in the plan.
- 24-hour continuous monitoring is to be provided by a Fisher Fume Alert methane gas detector with recorder or comparable equipment
- a three-week period, rather than the original two weeks, for Priority 1 homes is to be implemented.
- the final sampling procedure for the 24-hour bag samples at the Priority 2 homes will be decided at the Air Quality Subcommittee meeting on August 15.
- exterior monitoring will include probe installation at one of the following two locations in order of priority:
  1. A feasible location close to the highest outside OVA reading.
  2. A feasible location nearest the home and the BKK landfill boundary.

It is stressed that SCS is required to maintain strict quality control and chain of custody procedures throughout the program. QA/QC and chain of custody protocols, currently being prepared by DOHS, will be available by August 15, 1984. Further, SCS is expected to provide and implement a health and safety plan for field personnel on the site. Contingency plans, outlining action to be taken in the event high levels of toxic gases are encountered, must be completed and presented by SCS to their field personnel before work begins. These plans, along with the action levels decided upon by SCS, will be given to

DOHS and EPA officials for review.

As discussed with you previously, please provide this office with a list of your equipment needs for transmittal to BKK. BKK must indicate by August 15, what equipment they have obtained. As a contingency, please continue your independent effort to locate all required equipment. In the event that BKK is unable to provide equipment in an expedient manner, you will be authorized to procure what is needed. I would like to reemphasize, that you should minimize discussions with BKK concerning the monitoring program, and must have a DHS representative present when conversations are needed.

As the data are collected and reevaluated, the monitoring plans may need to be modified, extended, or altered. DOHS reserves the right to change the monitoring plans as needed.

Sincerely

Nestor Acedera, Manager
Site Mitigation Unit
Southern California Section
Toxic Substances Control Division

Attachment
cc: Dick Mandeville
Designated Project Engineer
c/o BKK Lanfill
2210 South Azusa Avenue
West Covina, CA 91791

APPENDIX C.—MISCELLANEOUS DOCUMENTS

DATA ADDENDUM - AUGUST 10, 1984

We have assembled and provided all the data that is currently available on the homes of the evacuees (beginning with data collected July 17, 1984). Included in the data packages are field notes, drawings, raw field data, and data summaries. We have attached additional data sheets that either replace or supplement some pages in the package in an effort to provide the most complete and up to date information possible.

Please note the fact that not all the material provided have yet been subjected to quality assurance procedures. If you have any questions, please contact Mel Knight or Harriet Tregoning of the California Department of Health Services at (213) 620-2380.

Attachments

REPLACEMENT

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive, El Monte, California 91731

ANALYTICAL LABORATORY REPORT

To Edward Camarena,
Director of Enforcement

Report Date July 24, 1984

Laboratory No. 82054-1

Sample Description

Two each 2-1 bulbs of ambient air at 2328 Lynn Court

Submitted by

T. Severino

Date Sample Received

7-23-84

Sample Source Residence: 2328 Lynn Court
West Covina

ANALYTICAL WORK PERFORMED AND RESULTS

Vinyl chloride and methane by FID/GC.

Sample	Vinyl Chloride	Methane
Bulb A1, 2328 Lynn Court, 7-22-84, 1330 hours, kitchen sink	42 ppb	2250 ppm
Bulb 16, 2328 Lynn Court, 7-22-84, 1845 hours, kitchen sink	26 ppb	1470 ppm

Ref: 54V-46
SB11-26

70D066-R3-788

Approved by

Abe B. Moore, Director
of Laboratory Services

ACLD

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive, El Monte, California 91731

ANALYTICAL LABORATORY REPORT

To Edward Camarena,
Director of Enforcement

Report Date August 2, 1984

Laboratory No. 82124-1

Sample Description

One each 2-1 bulb of ambient air from kitchen.

Submitted by

K. Cambridge-DOHS

Date Sample Received

7-27-84

Sample Source Residence: 2711 Miranda
West Covina

ANALYTICAL WORK PERFORMED AND RESULTS

Vinyl Chloride and Methane by FID/GC.

Sample	Vinyl Chloride	Methane
Bulb FY, 7-27-84, 6:40 a.m., from kitchen, 2 ft. high, 8 ft. east of west wall, 10 ft. south of north wall.	5 ppb	13.3 ppm

Ref: TCH16-86
SB11-40

70D066-R3-788

Approved by Abe B. Moore

Abe B. Moore, Director
of Laboratory Services

ADD

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive, El Monte, California 91731

ANALYTICAL LABORATORY REPORT

To Edward Camarena,
Director of Enforcement

Report Date August 1, 1984

Laboratory No. 82124-2

Sample Description

One each 2-l bulb of ambient air from kitchen sink.

Submitted by

K. Cambridge-DOHS

Date Sample Received

7-27-84

Sample Source Residence: 2711 Miranda
West Covina

ANALYTICAL WORK PERFORMED AND RESULTS

Vinyl Chloride and Methane by FID/GC.

Sample	Vinyl Chloride	Methane
Bulb CL, 7-27-84, 6:43 a.m., 1 ft. above bottom shelf, 1 ft. west of east wall, 1 ft. south of north wall.	6 ppb	14.9 ppm

Ref: TCH16-86
SB11-40

70D066-R3-788

Approved by Abe B. Moore

Abe B. Moore, Director
of Laboratory Services

NOTE all electricity off
gas off

MONITORING SURVEY BKK LANDFILL VICINITY

ADD

Address: 2715 Miranda
Date: 7/28/84
Time: 0900 - 0846

Instrument Type: OVA
Instrument Number: C6939
Inspector(s): McNally-Cambridge

(Note: all measurements in ppm Total Hydrocarbon)

OUTSIDE HOME - 0846

Background		
Water Meter Box ✗	15	15
Entry Planter		
Along Foundation		
Front		
Left side		
Back ✗	4	3.6
Right side		

INSIDE HOME 0900

✓ Background entry	40	42	
✗ Living/Family Room	42	42	
✗ Master Bedroom	35	35	(U/D)*
Fireplace			
✓ Kitchen Sink	34	35	
✓ MB Bathroom Sink 1	28	28	(U/D)
Bottom Bathroom Sink 2	18	22	(U/D)
Bedroom Closet			(U/D)

Other Points (noted on map below)

1. 4/3.6
2.
3.
4.
5.

Sample I.D.#

Location

Comments:

Sketch of Homesite (note in-ground reading points and north direction)

* Backyard had been watered by sprinklers

* Circle U or D for Upstairs or Downstairs

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive, El Monte, California 91731

ANALYTICAL LABORATORY REPORT

To Edward Camarena,
Director of Enforcement

Report Date July 24, 1984

Laboratory No. 82054-28

Submitted by T. Severino

Date Sample Received 7-24-84

Sample Description

One each 2-1 bulb of ambient air taken from crack in wall.

Sample Source Residence: [redacted]
West Covina

ANALYTICAL WORK PERFORMED AND RESULTS

Vinyl chloride and methane by FID/GC.

Sample	Vinyl Chloride	Methane
2715 Miranda, 7-23-84, from crack in wall	79 ppm	6.5%

Ref: SB11-26
54V-47

70D066-R3-788

Approved by Abe B. Moore

Abe B. Moore, Director
of Laboratory Services

TO: STEVE PERRY
[redacted]
WEST COVINA

FROM: RIC NOTINI
CALIFORNIA DEPT. OF HEALTH SERVICES

SUBJECT: PRELIMINARY RESULTS OF ANALYSES*
OBTAINED VIA TELEPHONE FROM SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT.
* SUBJECT TO VERIFICATION

PLEASE SEE ATTACHED DATA. IF YOU HAVE ANY QUESTIONS, PLEASE CALL ME OR MY SUPERVISOR, NESTOR ACEDERA, AT (213) 620-2380.

State of California
Department of Health Services
Toxic Substances Control Division
107 South Broadway, Room 7128
Los Angeles, CA 90012

Riccardo Notini
Waste Management Specialist

(213) 620-2380
ATSS 8-640-2380

MONITORING SURVEY — BKK LANDFILL VICINITY

PRELIMINARY RESULTS OBTAINED VIA TELEPHONE FROM SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT — SUBJECT TO VERIFICATION.

2715 MIRANDA

DATE: 7/21/84
TIME: 4:00 PM
TYPE OF SAMPLE: EVACUATED FLASK
LOCATION: WALL IN BACKYARD
RESULTS: METHANE (CH_4) 6.5%
VINYL CHLORIDE 79 PARTS PER MILLION

DATE: 7/24/84
TIME: 5:00 PM
TYPE OF SAMPLE: EVACUATED FLASK
LOCATION: BASE OF WALL IN BACKYARD
RESULTS: VINYL CHLORIDE 180 PARTS PER MILLION

LOCATION: 1 FOOT ABOVE GROUND NEAR WALL IN BACKYARD
RESULTS: VINYL CHLORIDE 34 PARTS PER BILLION

COMPILED BY: RIC NOTINI
WASTE MANAGEMENT SPECIALIST
DEPARTMENT OF HEALTH SERVICES

[redacted]

In front of house
OVA Background = 4 ppm
HNU " = 2 ppm

23 July
1145 L

	OVA	HNU	%	
A	> 1000	8	0	
→ B	> 1000	> 2000	100%	* PR sample taken
C	400	38	0	
D	2.4	500	0	
E	1	8	0	
F	NT	NT	0	

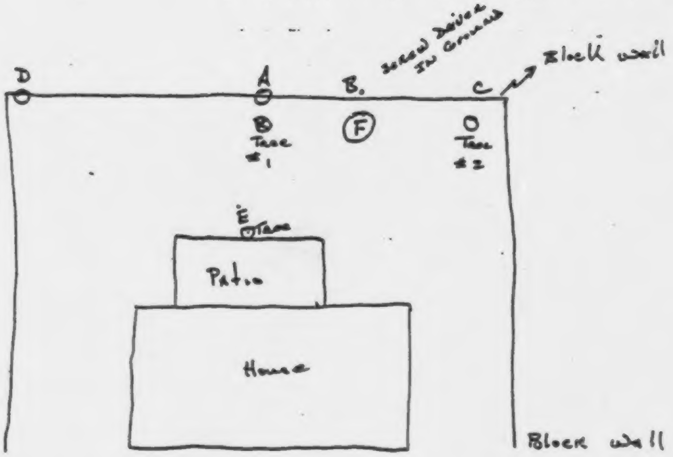
1410 L 23 July Background HNU = 1.2 ppm
OVA = 4 ppm

	OVA	HNU	%
A	> 1000	50	100
B	> 1000	280	100
C	> 1000	12	0
D	60	6	0
E	82	5	0
F	45	200	0

BG H = 2
0840 24 July

A	270	210	0
B	>1000	720 ~~178~~	10%
C	84	~~84~~ 280	0
D	32	30	0
E	6.5	7	0
F	4.1	5	0

2715 Miranda


D
A
B.
C
screw driver in ground
Block wall
B
Tape #1
F
Tape #2
E
Tape
Patio
House
Block wall

Pts to be monitored

A	at wall + ground junction (bottom of wall)
B	at wall + ground contact
C	at wall + ground contact
D	at wall + ground contact
E	at Patio + ground contact
F	Breathing zone next to wall

MONITORING SURVEY BKK LANDFILL VICINITY

Address: 2715 MIRANDA
Date: 7/24/84
Time: 17:00 - 17:30

Instrument: OVA / HNU (~9.5 EV)
Inspector(s): DOUG CAMPBELL
BILL ANTHONY

(Note: all measurements in ppm Total Hydrocarbon)

OUTSIDE HOME (NOT TESTED)	
Water Meter Box	
Entry Planter	
Along Foundation	
Front	
Left side	
Back	
Right side	

INSIDE HOME	OVA	HNU
Living/Family Room	20	0
Master Bedroom	15	0
Fireplace	74	0
Kitchen Sink	200	0
Bathroom Sink 1	72	0
Bathroom Sink 2	17	0
Bedroom Closet	15	0

Other Points (noted on map below)

1. 50 0
2. 16
3. 18 0
4. 20 0.2
5. 36 0

Sample I.D.#

Location

Comments: ROOM UPSTAIRS PAINTED WITH WATER-BASED PAINT, ONE SMALL WINDOW WAS LEFT OPEN FOR VENTILATION BY OWNER.

Sketch of Homesite (note in-ground reading points)

EVACUATED FLASK SAMPLES

SAMPLE LD - TAKEN UNDER KITCHEN SINK

SAMPLE M7 TAKEN UNDER BATHROOM SINK

MONITORING DATA SUMMARY FOR NINETEEN EVACUATED HOMES IN THE BKK LANDFILL VICINITY

TIME ZONES:

Zone 1 - 0:01 - 6:00

Zone 2 - 6:01 - 12:00

Zone 3 - 12:01 - 18:00

Zone 4 - 18:01 - 24:00

NOTE: (___) denotes an "upstairs" reading/sampling all readings not otherwise indicated were taken on the ground floor.

X/Y - indicates two consecutive 30-second readings (with a 30-second equilibration period)

MB - indicates a master bathroom sink.

LOCATION: 240 LEANNA DR.

OVA - measurement of total hydrocarbons in ppm

	DATE: 1984	7/23	7/24	7/25	7/26	7/27	7/28	8-1	8-2					
	TIME:	0845	0755	1107	0933	1000	1118	17:50	01:00					
	TIME ZONE:	2	2	2	2	2	4	3	1					
CONFINED SPACE (INSIDE)	KITCHEN SINK	4.4	23	13	31	7.5/7.0		4.0/4.5	6.2/6.2					
	BATHROOM SINK 1	4.3	15	11	23		3.5	–	6.5					
	BATHROOM SINK 2 #2	4.1	18	5.6	18	4"	4/4"	4.0"						
	BEDROOM CLOSET	3.0	19	6.2	17	4"	4"	3.5"						
BREATHING SPACE (OUTSIDE)	BACKGROUND					5	4	3.5	–					
	LIVING/ FAMILY ROOM	4.0	24	9.6	30	7.5/7.0	4/4	4.0	6.6/6.6					
	MASTER BEDROOM	3.0	20	6.5	18	5"	4"	3.5/3.5"	–					
	FIREPLACE	4.4	26	11	31		4	–	–					
	DEN ~~DINING ROOM~~					7			–					
	[illegible]					6"								
CONFINED SPACE (OUTSIDE)	BACKYARD 1	1.9	18	2.0	3.0									
	BACKYARD 2	1.9	12	0.4	4.5									
	FRONTYARD		20	8.0	12									
	GARAGE	0	2	3.4	3.1									
	meter box								6.5					
AMBIENT	ENTRY					2/1.5	4	3.5/3.5	2.4/2.8					

LOCATION: 2401 LEANNA HNU - measurement of non-methane organic & inorganic cmpds in ppm

DATE:	8-2												
TIME:	01:00												
TIME ZONE:	|												

CONFINED SPACE (INSIDE)

KITCHEN SINK	0.5/0.5												
BATHROOM SINK 1	0.5												
BATHROOM SINK 2													
BEDROOM CLOSET													

BREATHING SAPCE (INSIDE)

BACKGROUND													
LIVING/ FAMILY ROOM	0.5/0.5												
MASTER BEDROOM													
FIREPLACE													
DINING ROOM													

CONFINED SPACE (OUTSIDE)

BACKYARD 1	|												
BACKYARD 2	|												
FRONTYARD	|												
GARAGE	|												
meter box	0												

BIENT

ENTRY	0.5/0.5												

LOCATION: 2401 LEANNA VINYL CHLORIDE (ppb)/METHANE (ppm) by FID/GC

	DATE:	8-1												
	TIME:	01:48												
	TIME ZONE:	1												
CONFINED SPACE (INSIDE)	KITCHEN SINK	<2/6.3												
	BATHROOM SINK 1													
	BATHROOM SINK 2													
	BEDROOM CLOSET													
		VC/CH4												
BREATHING SAPC (OUTSIDE)	BACKGROUND													
	LIVING/ FAMILY ROOM													
	MASTER BEDROOM													
	FIREPLACE													
	DINING ROOM													
CONFINED SPACE (OUTSIDE)	BACKYARD 1													
	BACKYARD 2													
	FRONTYARD													
	GARAGE													
SIENT	ENTRY													

cor13

L-331

Sheet 1 of 1

LEAK INVESTIGATION

equested by A. Peterson Division S.G.V. Phone No.(25-2231

eet Crew At Industry Base

ay Wed Date 7-18-84 Time 8:30 Thomas Guide Pg. ________ Code ____

ocation No. 1. 2322 Lynn Ct W. Covina

ocation No. 2. 2041 Nanette W. Covina

ocation No. [redacted] (manhole in street). W. Covina

ocation No. ____________________

ocation (Reference) Natural Gas from M.S.A. 2328 Lynn Ct.

ANALYSIS ON AIR NITROGEN AND CARBON DIOXIDE FREE BASIS:

	No. 1	No. 2	~~No.~~ 3	No.	(Reference)
Combustible Gas, %	10.25	87.79	14.90		96.76
Methane, %	100.00	99.78	100.00		95.71
Ethane, %	0.00	0.00	0.00		3.20
Propane, %	0.00	0.04	0.00		0.78
Iso-Butane, %	0.00	0.10	0.00		0.08
N-Butane, %	0.00	0.00	0.00		0.14
C_5 Plus, %	0.00	0.07	0.00		0.09
Helium, ppm	0	0	0		400
Gas from Our Syst	No	No	No		YES

Remarks: ____________________

Tested By B. C. Smith Date 7-18-84 Oral Report To A. Peterson

Approved J. V. Bals Copies To: E.D. Laughren

A.B. Peterson

DATE TIME		7/21 1240	7/22 0800	7/22 1626	7/23 0845	7/24 [illegible]	7/25 1107	7/26 0933	
KITCHEN SINK	% LEL	0	0	0	0	0	0	0	
	Organic (ppm)	1.0	0.4	0	44	23	13/0.9	31.0/1.4	
BATHROOM SINK	% LEL	0	0	0	0	0	0	0	
	Organic (ppm)	1.0	0.4	0	2.3	7.5	11/0.6	23.0/1.0	
BEDROOM CLOSET	% LEL	0	0	0	3.0	0	0	0	
	Organic (ppm)	1.0	0.2	0	0	[illegible]	6.2/1.0	17.0/1.2	
FIREPLACE	% LEL	0	0	0	[illegible]	0	0	0	
	Organic (ppm)	1.0	0.2	0	[illegible]	20	11/0.6	31/1.2	
LIVING ~~FAMILY~~ ROOM	% LEL	0	0	0	2.0	0	0	0	
	Organic (ppm)	1.0	0.2	0	[illegible]	24	9.6/0.9	30/1.2	
MASTER BEDROOM	% LEL	0	0	0	3.0	0	0	0	
	Organic (ppm)	1.0	0.3	0	0	.20	6.5/0.8	18.0/1.2	
M. BEDROOM BATH SINK	% LEL	0	0	0	4.1	0	0	0	
	Organic (ppm)	1.0	0.2	0	0	[illegible]	5.6/0.8	18.0/1.1	
BACKYARD A*	% LEL	NT	0	0	0	0	0	0	
	Organic (ppm)	NT	0.2	1	1.9	[illegible]	2.0/1.2	3.0/1.3	
BACKYARD B**	% LEL	NT	0	0	0	0	0	0	
	Organic (ppm)	NT	0.2	1	1.9	[illegible]	5.4/0.6	4.5/2.2	
FRONT YARD	% LEL	0	NT	0		0	0	0	
	Organic (ppm)	1.0	NT	1		20	[illegible]	12.0/1.2	
GARAGE DOOR	% LEL	0	0	0	[illegible]	0	0	0	
	Organic (ppm)	1.0	0.4	1	[illegible]	0	3.4/0.8	30/1.2	

OVA/HNu

* [illegible] side, facing wall

[illegible] SURVEY BKK LANDFILL VICINITY

[illegible]:	[illegible] Leanna	Instrument Type:	OVA-108
Date:	7/28/84	Instrument Number:	S/N 2458
Time:	1000 L	Inspector(s):	GREG/NESTOR

(Note: all measurements in ppm Total Hydrocarbon)

OUTSIDE HOME	Entry / Exit
Background	2 / 1.5
Water Meter Box	
Entry Planter	
Along Foundation	
Front	
Left side	
Back	
Right side	

INSIDE HOME		
Background	5	
Living/~~Family~~ Room	7.5/7.0	
Master Bedroom	5	[✓ U] D*
Fireplace	—	
Kitchen Sink	7.5/7.0	
Master Bathroom Sink 1	4	[✓ U] D
Bedroom ~~Bathroom Sink~~ 2	6	[✓ U] D
Bedroom Closet	4	[✓ U] D
Den	7	[✓ D]

Other Points (noted on map below)

1.
2.
3.
4.
5.

Sample I.D.*

Location

Comments:

Sketch of Homesite (note in-ground reading points and north direction)

* Circle U or D for Upstairs or Downstairs

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, *Governor*

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION**
107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012-4596
(213) 620-4460

August 10, 1984

Mr. Kenneth B. Kazarian
Vice President
BKK Corporation
P.O. Box 3038
Torrance, CA 90510

CLEAN-UP AND ABATEMENT ORDER NO. 84- 4 , BKK LANDFILL
(FILE NO. 63-31), (CI 4550), (100.152).

We have reviewed your Work Plan submitted on August 3, 1984, in response to Clean-Up and Abatement Order No. 84-4. The Work Plan is adequate to abate the condition of pollution cited in our Order with the added condition that gas probes be installed near the proposed gas extraction wells.

During field inspection of the landfill on August 9th, Mr. Bob Litzenberg of BCL & Associates, indicated to Regional Board staff that a gas extraction and gas probe system is to be installed on the site adjacent to the Miranda seep (the subject of our Order). The system is to be installed at about the same time you complete the work specified in the Work Plan. The system appears adequate to address our concern regarding the need for gas probes at the gas wells. Additional gas probes may be required if analyses of extracted water from the new wells proposed in the Work Plan indicate contamination.

You are reminded that the date for full compliance with Order No. 84-4 is August 15, 1984.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

RPG/RKD/gml

cc: Department of Health Services, Toxic Substances
 Control Division, Attn: Angelo Bellomo
 Environmental Protection Agency, Region 9,
 Attn: Phil Bobel
 South Coast Air Quality Management District,
 Attn: Ed Camarena
 Los Angeles County Department of Health Services,
 Attn: Douglas R. Steele
 City of West Covina, Attn: Mike Miller
 California Waste Management Board,
 Attn: Douglas Strauch
 Mr. Skipanovich, AG's Office

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012-4596
(213) 620-4460

August 3, 1984

HAND DELIVERED

Mr. Ken B. Kazarian
BKK Corporation
P.O. Box 3038
Torrance, CA 90510

CLEANUP AND ABATEMENT ORDER NO. 84-4

On July 25, 1984, Regional Baord staff resampled the discharge from the polluted seep north of homes located at 2743 and 2745 Miranda Street. This is the same polluted seep which was sampled by Regional Board staff on July 13 and which is the subject of Cleanup and Abatement Order No. 84-4. The resampling has confirmed our original finding that this polluted wastestream is a result of landfill operations and threatens to cause pollution of the waters of the State. The laboratory analyses of the samples have shown the following:

	Sample Collection Date	
Constituent	7/25/83	7/13/83
vinyl chloride	40 ppb	40 ppb
1, 1 _ dichloroethylene	3.2 ppb	2.0 ppb
1, 2 _ dichloroethylene	none detected	trace
1, 1 _ dichloroethane	1.6 ppb	none detected

The compliance date for correcting the seep problem, established in Order 84-4, is August 15, 1984.

Should you have any questions about this matter, please call Hank Yacoub at (213) 620-4397.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: See attached mailing list.

BKK Mailing List

cc: Regional Board Members
State Water Resources Control Board, Division of Technical
Services, Attn: Ed Anton
Attn: Jim Parsons
Attn: Fred Lercari
State Water Resources Control Board, Office of Chief Counsel
Attn: Kathy Keber
Department of Health Services, Toxic Substance Control
Division, Attn: Angelo Bellomo
Environmental Protection Agency, Region 9, Toxic Control
Division, Attn: Phil Bobel
South Coast Air Quality Management District
Attn: Ed Camarena
Los Angeles County Department of Health Services
Attn: Douglas R. Steele
City of West Covina
Attn: Mike Miller
California Waste Management Board
Attn: Douglas Strauch
Attorney General's Office
Attn: Mr. Emile Stepanovich

BKK LANDFILL
BKK
2210 SO. AZUSA AVENUE • WEST COVINA, CA 91791 • (213) 965-0911

August 3, 1984

Mr. Hank Yacoub
Supervisor/Water Resource Control Engineer
Regional Water Quality Control Board
Los Angeles Region
107 South Broadway Suite 4027
Los Angeles, CA 90012

SUBJECT: Clean-up and Abatement Order No. 84-4
(File No. 63-31) (CI 4550) (100.152) Work Plan

Dear Mr. Yacoub:

Enclosed herewith is a proposed work plan developed by BKK Corporation and LeRoy Crandall and Associates staff.

LeRoy Crandall discusses the geological aspects and remedial work to be done to eliminate the seeping condition.

The water pumped from the subject seep will be conveyed by a 2-inch pipe line to the site gas condensate drainage system. This drain is located on Bench "C" adjacent to Nogales Street. The liquid will be transported by a gravity drain to Barrier 1 storage tanks. This liquid will be mixed in with other liquids from the gas system and Barriers 1 and 2 leachates which are presently being disposed of by the approved solidification process.

The proposed water from the subject seep should be able to be used for dust control purposes. But at the present time, the drain and storage systems on-site do not allow liquid segregation in the eastern portion of the site. When our on-site liquid handling systems are capable of separating liquid types, we propose to use this liquid for dust control purposes should the liquid analyses be within that limitation.

We propose to start on the remedy of the subject seep by August 8, 1984, substantially following the work plan recommended by LeRoy Crandall and Associates. Access and working conditions on this project are extremely difficult and hazardous. Care will have to be taken to protect the terrain, machinery and work force. I estimate the project should be completed by August 31, 1984.

Late August 3, 1984 we received a verbal report on two water samples taken at the subject seep. The analyses detected no organics from either sample. The written analyses will be forthcoming.

If there are any questions, please contact Tom Nuckols at (818) 810-1085.

Very truly yours,

Thomas E. Nuckols

Thomas E. Nuckols
Director of Landfill Engineering

TEN/cg

cc: Department of Health Services, Toxic Substances
 Control Division, ATTN: Angelo Bellomo
 Environmental Protection Agency, Region 9
 ATTN: Phil Bobel
 South Coast Air Quality Management District
 ATTN: Ed Camarena
 Los Angeles County Department of Health Services,
 ATTN: Douglas R. Steele
 City of West Covina, ATTN: Mike Miller
 California Waste Management Board,
 ATTN: Douglas Strauch

SUBJECT: Preliminary Geologic Report
Spring Area
Rear of 2743 & 2745 Miranda Street
West Covina, CA

REFERENCE: California Regional Water Quality Control Board, Los Angeles Region, Transmittal Letter dated July 27, 1984, Clean-up and Abatement Order, BKK Landfill (File No 63-31) (CI 4550) (100.152) and Clean-up and Abatement Order No. 84-4.

In accordance with your instructions and in compliance with the above referenced clean-up and abatement order we have made a preliminary geologic evaluation of the subject spring or seepage area.

LOCATION AND ACCESS

As discussed in the above reference, the seep is located in a southerly draining ravine or canyon that drains to a storm drain catch basin at the rear and between the subject residences. Several other tributary ravines or canyon drainage also flow toward this catch basin during rainfall periods. Approximate locations of several of the pertinent surface features are shown on the attched 1"=100' scale Preliminary Geologic Map.

Access to the subject spring site is difficult owing to relatively steep southerly facing slopes and tract grading to the south that has limited canyon access from downslope by cut and fill slope construction. Access to the study area to date has been on foot from the cul-de-sac about 500' east of the residences at 2743 and 2745 Miranda Street.

DISCUSSION OF LABORATORY FINDINGS

It is our understanding that CRWQCB personnel have sampled the subject spring on July 13 and July 25, 1984. Relative to results of the July 13 sample item 4 of the above reference states:

> "Results of the laboratory analyses revealed the presence of vinyl chloride, a hazardous substance and a human carcinogen, at concentrations of 40 micrograms per liter (ug/l) and two isomers of dichloroethylene, both of which are hazardous substances: 1,1 dichloroethylene (2 ug/l) and 1,2 dichloroethylene (trace)".

Although, we have not yet seen results of the July 25 sampling we understand nearly identical results were obtained relative to the previously listed constituents and a very small quantity of an additional constituent, 1,1 dichloroethane was also obtained.

We believe studies to date have disclosed mainly, if not exclusively volatile substances similar to substances found locally in other portions of the landfill as a result of gas phase materials in contact with the groundwater surface. Because of this, it is our preliminary opinion that the volatiles encountered in the subject seep are a result of gaseous migration in the vadose zone similar to gas problems encountered in some nearby areas. Recently a large number of gas wells have been installed in southern and southeastern perimeters of the landfill area as a result of gas exceedances detected in those areas. We are hopeful that these new installations and on-going installations in progress will remove the source of the volatiles affecting the subject spring. Nevertheless, more direct measures are required and will be taken concerning the subject seep area as discussed later in this report.

GEOLOGIC CONDITIONS

LITHOLOGY

Our earlier mapping of the landfill indicates the spring area is undertain by Miocene marine Puente Formation bedrock consisting of interbedded sandstone, siltstone and shale, with fine grained sandstone being a major rock type in this area. The sandstone unit (tpss on the Geologic Map) varies between friable (uncemented to only lightly cemented) and hard (typically as a result of calcium carbonate cementation). The Puente Formation sandstone in its friable or uncemented portions is permeable and may be subject to migration of liquid or gas particularly along planes of stratification. However, permeability across bedding stratification is considerably lower as a result of siltstone, shale and clay strata that form partings in the sandstone. Locally fault or shear planes may also tend to impede flow rates through the sandstone bedrock.

Our additional mapping at the spring area and in nearby ravines revealed steeply dipping strata traversing the area in approximate east-west directions. An approximately 2 foot thick cemented limy sandstone bed was mapped trending across the southerly dipping canyons with a northerly dip of about 65-75°. Locally, this strata exhibited vague striations or slickensides suggesting faulting or flexural slippage along bedding during folding of the rock. Hard cementation coupled with shearing and presence of interstratified shale partings appear to have allowed this strata to act as a relatively impermeable ledge relative to cross bedding flow in a down canyon direction. It appears that this ledge has acted as a dam in which the water level impounded behind the dam intersects the ground surface within about 10 feet upstream of the location where the 2' cemented strata crosses the ravine bottom.

A short distance downstream of the spring source is a flourishing stand of cat tails. Upstream of the cat tails, surface flow is estimated at about a gallon per minute. Downstream of the cat tails flow is significantly reduced (apparently owing to transpiration within the cat tails) and shortly downstream, surface flow stops and the ground becomes dry.

Aside from the cat tails, several willow trees are present locally along canyon bottoms and along the approximate trend of the sandstone ledge.

We made a reconnaissance of canyons or ravines east and west of the subject seep without encountering similar types of seepage. We attribute this to the fact that the ravine in which the seepage is found intersects the sandstone bed or ledge at a slightly lower elevation (below 775 on the base map for the Geologic Map) than the other ravines.

This elevation for the water surface appears to be consistent with water levels encountered in some of the nearest exploration borings and core holes we have made a few hundred feet to the northeast and west.

RECOMMENDATIONS FOR CLEAN-UP AND ABATEMENT

I. In order to mitigate the seepage condition from the spring at the rear of 2743 and 2745 Miranda Street we recommend the following work plan.

A. Lower a hillside type drilling rig into the canyon obtaining access down the ridge west of the seep and drill one or more well points along the canyon bottom down to; but not penetrating below the 2' cemented strata discussed in the text of this report. See the cross section for suggested locations.

B. Install pumps as needed to lower the ground water surface upstream of the spring and thereby starve the downstream area.

C. Avoid unnecessary disturbance of the natural ground surface and vegetation to minimize potential for erosion and soil slippage as a result of winter rain falling on denuded soil.

D. Provide a program for monitoring soil materials in the vicinity of previous sampling locations until volatiles have disappeared or if still present within a reasonable time span-We suggest 6 months-make arrangements to remove and replace remaining contaminated soil with compacted fill. Should the latter option prove necessary, an access road behind the rear of homes along Miranda Street would likely be needed.

E. All liquids extracted from wells or collected from the seepage area should be conveyed to suitable disposal points in appropriate containers or pipe lines.

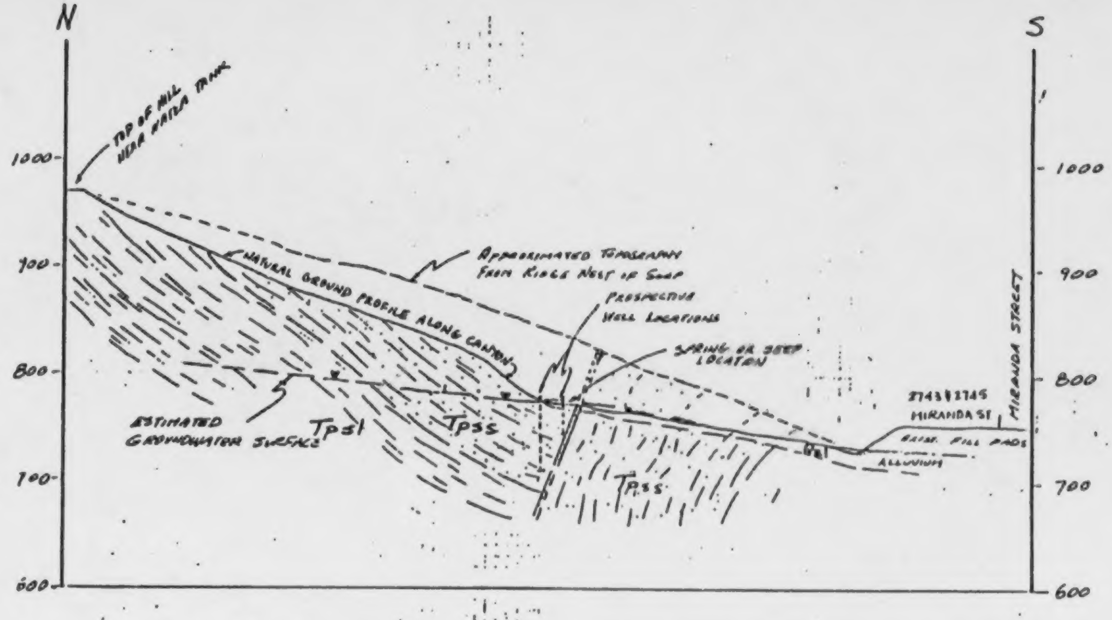
F. Additional geologic and hydrologic observations should be made during the drilling and mitigation process to confirm the validity of our preliminary findings and/or to provide modifying recommendations in event they are needed.

The maps, sections and text of this report were prepared on a high priority basis in order to hasten mitigation efforts. It is therefore of a preliminary nature and may be subject to correction or revision. We therefore, make no warrenty concerning the information contained herein.

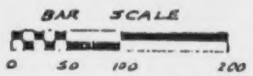
Very truly yours,

Monte Ray

Monte Ray
Certified Engineering Geologist 918

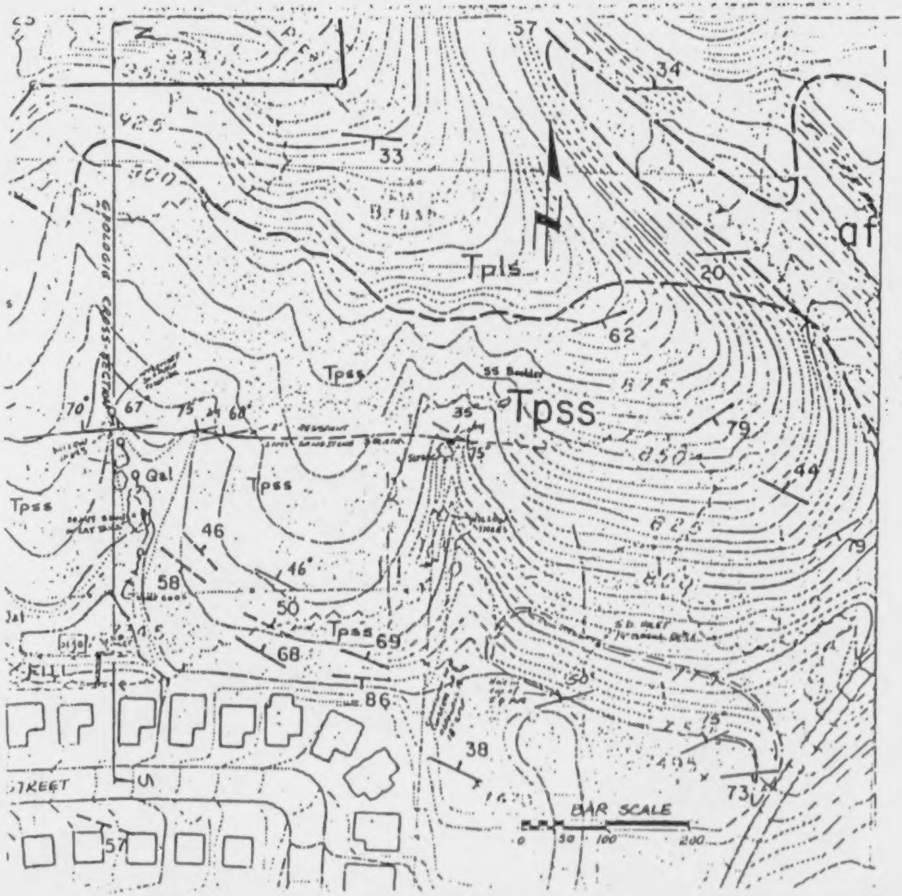

N
S
1000
900
800
700
600
TOP OF HILL NEAR WATER TANK
NATURAL GROUND PROFILE ALONG CANYON
APPROXIMATED TOPOGRAPHY FROM RIDGE WEST OF SHOP
PROSPECTIVE WELL LOCATIONS
SPRING OR SEEP LOCATION
ESTIMATED GROUNDWATER SURFACE
Tpsl
Tpss
Tpss
Tpss
3743 & 3745 MIRANDA ST
MIRANDA STREET
EXIST. FILL PADS
ALLUVIUM

GEOLOGIC CROSS SECTION


BAR SCALE
0
50
100
200

JOB NO. E-83124-1

LeROY CRANDALL AND ASSOCIATES


Tpls
Tpss
Qal
qf
Brush
GEOLOGIC CROSS-SECTION
SS Boulder
FILL
STREET
BAR SCALE
0
50
100
200
925
900
875
850
825
800
775
57
34
33
20
62
79
44
35
75
70
67
68
46
58
50
69
86
38
73

PRELIMINARY
GEOLOGIC MAP

Qal - ALLUVIUM
Tpls - PUENTE FORMATION SILTSTONE AND SHALE
Tpss - PUENTE FORMATION FINE GRAIN SANDSTONE
70° - STRIKE AND DIP OF BEDDING
35° - STRIKE AND DIP OF BEDDING (APPROXIMATED)
65° - STRIKE AND DIP OF JOINT
FILL APPROXIMATE LIMITS OF FILL

JOB NO. E-83124-1

LeROY CRANDALL AND ASSOCIATES

JL

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
7 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012-4596
(213) 620-4460

July 27, 1984

HAND DELIVERY

Mr. Kenneth B. Kazarian
Vice President
BKK Corporation
P.O. Box 3038
Torrance, CA 90510

CLEAN-UP AND ABATEMENT ORDER, BKK LANDFILL
(File No. 63-31) (CI 4550) (100.152)

During a field inspection on July 13, 1984, Regional Board staff collected a sample of water from a seep in a ravine east of the landfill. Laboratory analyses have revealed the presence of vinyl chloride in the sample at hazardous levels.

Enclosed is a Clean-Up and Abatement Order which directs you to correct this condition of pollution forthwith and to submit a plan of action to that end by July 30, 1984.

If you have any questions regarding this matter, please contact Mr. Hank Yaccub at (213) 620-4397.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

RKD:pag

Enclosure

cc: See attached mailing list.

CLEAN-UP AND ABATEMENT ORDER NO. 84-4

THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION, FINDS:

1. The BKK Company (a corporation) operates a Class I Sanitary Landfill at 2210 South Azusa Avenue, West Covina, California, 91792.

2. This facility operates under waste discharge requirements contained in Order No. 78-140, adopted by this Board on November 27, 1978, and amended by Order No. 84-41, adopted May 21, 1984.

3. On July 13, 1984, a member of this Board's staff sampled a discharge from a seep in a ravine east of the landfill boundary (but still on BKK owned land) and northerly of residences at 2743 and 2745 Miranda Street, West Covina. This discharge surfaces about half way up the approximately 100-foot hill behind these houses. The natural path of this discharge would lead it to a storm drain catch basin at the rear of and between the residences. The catch basin is in a drain approximately 20-30 feet below the level of the houses. This discharge percolates back into the ground prior to reaching the catch basin under the present dry-weather conditions.

4. Results of the laboratory analyses revealed the presence of vinyl chloride, a hazardous substance and a human carcinogen, at concentrations of 40 micrograms per liter (ug/l) and two isomers of dichloroethylene, both of which are hazardous substances: 1,1 dichloroethylene (2 ug/l) and 1,2 dichloroethylene (trace).

5. This polluted waste stream is a result of landfill operations and threatens to cause pollution of the waters of the State.

6. This enforcement action is being taken for the protection of the environment and as such is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21100, et seq.) in accordance with Section 15321, Chapter 3, Title 14, California Administrative Code.

BKK CORPORATION ORDER

THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION, IN ACCORDANCE WITH SECTION 13304 OF THE CALIFORNIA WATER CODE, DOES HEREBY ORDER BKK COMPANY TO:

1. Clean up and abate the condition of pollutiion, or threatened condition of pollution, as noted above, forthwith.

2. Submit a work plan which will provide for:

   a. Containment of polluted water from this seep or any other polluted seep affected by landfill operations at other locations on or around the site.

   b. Wells and pumping which eliminate this seep and any other polluted seep discovered at the site.

   c. Management and proper disposal of the liquid collected or pumped from this seep and any other polluted seep discovered at the site.

3. Submit the workplan for approval by the Regional Board Executive Officer by July 30, 1984. The deadline for compliance with this order shall be August 15,1984. BKK shall submit copies of the workplan to the following agencies:

Department of Health Services, Toxic Substances
 Control Division, ATTN: Angelo Bellomo
Environmental Protection Agency, Region 9,
 ATTN: Phil Bobel
South Coast Air Quality Management District,
 ATTN: Ed Camarena
Los Angeles County Department of Health Services,
 ATTN: Douglas R. Steele
City of West Covina, ATTN: Mike Miller
California Waste Management Board,
 ATTN: Douglas Strauch

Pursuant to California Water Code, Sections 13304 and 13385 the Executive Officer may request the Attorney General to take the appropriate enforcement action against BKK Company including injunctive relief, or the Regional Board may schedule a hearing to consider requesting the Attorney General to take the appropriate enforcement action against the discharger, including injunctive and monetary remedies.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

Dated: July 27, 1984

Ambient Air Monitoring And Health Risk Assessment for Suspect Human Carcinogens Around the BKK Landfill in West Covina

By

California Department of Health Services
Toxic Substances Control Division

California Air Resources Board
Haagen-Smit Laboratory Division

and

South Coast Air Quality Management District

March, 1983

SUMMARY AND CONCLUSIONS

1. The ambient air concentrations of nine volatile compounds were monitored at five residential locations surrounding the BKK Corporations's hazardous waste landfill in the City of West Covina for a three month period (July 19 - October 15, 1982). These concentrations were compared to a control monitor located nine miles from the landfill site in a residential/commercial area of Pico Rivera. Those monitored substances include: chloroethene (vinyl chloride), tetrachloroethene (Perc), trichloroethene (TCE), 1,1-dichloroethene (vinylidene chloride), 1,2-dichloroethane (ethylene dichloride), benzene, chlorobenzene, trichloromethane (chloroform), and trans-1,2-dichloroethene. The California Department of Health Services considers all of these substances potential human carcinogens.

2. There continues to be periodic exceedences of the State Ambient Air Standard for vinyl chloride of 0.01 ppm (10 ppb). The concentrations of vinyl chloride as well as the frequency of exceedences are significantly lower than during the same period in 1981. This may be the result of the mitigation measures taken at the landfill since June 1981.

3. Relative to the Pico Rivera control station, air monitoring in the residential community around the BKK landfill shows elevated levels of chloroethene (vinyl chloride), as well as tetrachloroethene (Perc), trichloroethene (TCE), 1,1-dichloroethene (vinylidene chloride), 1,2-dichloroethane (ethylene dichloride), and benzene. Many of these compounds are found at detectable levels in other areas of the Los Angeles air basin. There is some data available which suggests that Perc, TCE and benzene occur at comparable levels in some areas of the L.A. air basin.

4. Since the stations around the site are not known to be near other sources of emissions of these compounds (dry cleaning establishments, plastics products manufacturers, metal finishing industries, etc.), the data suggest that the BKK site is a source of these compounds. The elevated levels of the chlorinated compounds in particular indicate a need for mitigation measures such as expansion of the landfill gas gathering system, upgraded maintenance programs, and changes in handling of wastes containing these compounds.

5. Further action is also mandated by the continued, periodic exceedences of the State's Ambient Air Quality Standard for vinyl chloride of 0.01 ppm (10 ppb).

6. All of the substances, even at the highest observed concentrations, are

believed to be present in concentrations well below their threshold for toxic, non-carcinogenic action.

7 At the low level of exposure experienced by residents adjacent to the BKK landfill, it is not possible to accurately calculate excess cancer risks. However, worst-case estimates of the individual excess cancer risks (maximizing both the exposure period and the concentrations) suggests that those residents living immediately adjacent to the landfill, and who are also subject to both down wind and air drainage emissions from the site, may have accumulated excess risks to date of 5/100,000. This risk exceeds the level at which the Department attempts to control excess risks (1/1,000,000). Assumptions built into these calculations lead the Department to believe that these numbers represent a maximum risk and that the acutual risk is lower.

8. Based on an estimate of exposed population within a one mile radius of the landfill site boundary, no additional cases of cancer are to be expected from exposure to date.

9. The individual cancer risks are at a relatively low level, and do not constitute a public health emergency.

10. Monitoring should be continued to determine the effectiveness of the remedial actions taken, and to further define: 1) The specific on-site sources of emissions, 2) The diurnal variation of concentrations and, 3) The dilution of these concentrations with distance from the landfill.

INTRODUCTION

BACKGROUND

In October, 1980, odor complaints from residents in the neighborhood surrounding the BKK landfill in West Covina prompted the South Coast Air Quality Management District (SCAQMD) to monitor for odorous organic compounds in the vicinity of the site. In May, 1981, vinyl chloride was detected in the samples from this monitoring. A subsequent air survey confirmed the existence of vinyl chloride at concentrations exceeding the California Air Resources Board (ARB) Ambient Air Quality Standard of 0.01 ppm (24-hour average). The SCAQMD announced its findings in June, 1981..

Because of these exceedences, the California Department of Health Services (DHS) immediately banned further disposal of wastes containing vinyl chloride at the BKK Landfill. An evaluation of the vinyl chloride data by the DHS indicated that although the levels posed no immediate health hazard to the surrounding population, they were of sufficient concern to warrant prompt efforts to reduce these emissions from the landfill.

Also in May, 1981, an interagency task force consisting of the SCAQMD, DHS, City of West Covina, Los Angeles County Health Department, State Solid Waste Management Board, and the California Regional Water Quality Control Board (Los Angeles Region) was formed to develop a program to reduce the odor emissions from the site. This task force implemented a series of actions to expand the landfill's gas recovery system, and to improve the efficiency of the waste gas incineration system. As a result of these efforts, the frequency of exceedences of the vinyl chloride standard, and of odor complaints, decreased significantly through the first half of 1982. These data were presented at a public meeting in the City of West Covina on July 1, 1982.

Continued citizen concerns regarding their exposure to volatile carcinogens from the site and the need to determine the overall effectiveness of the emission mitigation measures prompted a sub-group of the task force consisting of DHS, ARB, and SCAQMD to embark on an expanded monitoring program.

PURPOSE

This study has three purposes: 1) To evaluate the effectiveness of the mitigation measures already taken, and to determine whether or not further measures are necessary to control emissions from the site, 2) To determine if other volatile carcinogens besides vinyl chloride, known to have been disposed at the site in the past, are also present in the community at levels that would represent a public health concern, and 3) To provide a more comprehensive data base for assessment of the health risk posed by emissions of carcinogens from the BKK landfill in West Covina.

MPOUNDS SELECTED FOR MONITORING

Previous sampling of the landfill gas by SCAQMD, ARB, Euteck, Inc., and the University of Southern California indicated the presence at significant concentrations of suspected or known human carcinogens other than vinyl chloride. As with vinyl chloride, the presence of these compounds can be associated with the prior disposal of hazardous wastes at the site. Nine volatile compounds identified by these organizations were selected for monitoring based on their concentrations, carcinogenic potential, and the analytical capabilities of laboratories involved. These compounds are listed in Table I, along with information on their uses, waste sources, and concentration in the landfill gas. DHS considers all nine compounds to be known or suspect human carcinogens.

METHODOLOGY

SAMPLING STRATEGY

A meteorological survey previously conducted at the BKK landfill and adjacent residential areas indicated that the daytime predominant wind direction was from the southwest to the northeast. However, eddies were observed throughout the landfill, which is located in rough terrain on the south slopes of the San Jose Hills. Radjational cooling results in nighttime air drainage on the north and south slopes of the landfill, with wind flow from the south on the north slopes and from the north on the south slopes.

The data from the meteorological survey were correlated with odor complaints from the residential areas to determine the location of sampling sites which would reflect the maximum exposure of residents to toxic and hazardous gases emitted from the landfill. Six sites were selected and identified alphabetically from A to F (See Figure I). Two (E & F) reflected the daytime transport of contaminants, three (A, B and D) the nighttime transport, and one (C) was a control site nine miles away from the landfll in Pico Rivera.

Sites A and B were located in residential areas on the south side of the landfill and F in a residential area on the northeast side. Stations A and B were established by SCAQMD in May, 1981 as part of its vinyl chloride monitoring program. On August 26, 1982, site F was relocated to a residential area Northwest of the landfill because of odor complaints from this area. Sampling at this site was continued until the end of the program.

Site D was located at the entrance to the landfill on Azusa Avenue to sample emissions diverted by the recently constructed berms on the southerly boundary of the site. These berms were designed to contain emissions while creating mechanical mixing and dilution of the toxic compounds.

Site E was located at the highest elevation within the landfill itself, about 300 yards from the flares.

The control site C was located at the SCAQMD Pico Rivera air monitoring station. This site was selected to reflect contaminant concentrations in an area not influenced by the BKK Landfill. It was also selected because it is the closest monitoring station to the site where more routine data has been collected over a period of years. The data from this site was not intended to reflect ambient air concentrations of these toxic compounds in the Los Angles air basin.

A study period of three months (July 19 - October 15, 1982) was selected to provide an adequate data base. This period covered the warmest part of the year for the West Covina area.

Samples were collected five days per week, Sunday through Thursday. This frequency allowed sampling on one day with no activity on-site (Sunday), and on four days of normal landfill operations. On this schedule, samples were analyzed, during periods of normal laboratory operations with a minimum of storage prior to laboratory analysis.

Samples were collected in Tedlar bags continuously over a 24-hour period. This period was chosen over a shorter 12-hour or 4 hour period because it was necessary to determine the total daily dose of these compounds that one would receive. It is also the time basis for the ARB's ambient air quality standard for vinyl choride: 0.01 ppm. Tedlar bags were selected over other sampling methods such as absorbant tubes because of the greater confidence that the bag samples would provide an accurate picture of these compounds in the air. This sampling period and method allowed comparison of the data from this program with data collected by the SCAQMD from May, 1981 to June, 1982. It is also accepted methodology by the U.S. Environmental Protection Agency, ARB, and SCAQMD for determining compliance with the vinyl chloride standard.

An average of two samples per day were split between the two laboratories, SCAQMD and CARB (Haagen-Smit) Laboratory. Each laboratory withdrew a subsample directly from the septum opening of the Tedlar bag.

The effectiveness of Tedlar bags for sampling chlorobenzene was unknown at the initiation of the study period. Charcoal tubes were consequently selected as the medium for collecting these samples. Availability of equipment and laboratory capacity limited sampling to two per day; one at the control station C and one at Station A or B. Chlorobenzene sampling was initiated about midway through the study period, and analysis was performed by the DHS Air and Industrial Hygiene Laboratory in Berkeley.

ANALYTICAL METHODS

Chloroethene (vinyl chloride) and benzene were analyzed using a gas chromatograph (GC) equipped with a flame ionization detector (FID).

Other chlorinated compounds, 1,1-dichloroethene, trans-1,2-dichloroethene, 1,2-dichloroethane, trichloromethane (chloroform), trichloroethene (TCE) and tetrachloroethene (Perc) were analyzed usng a GC equipped with an electron capture detector (ECD). All compounds were quantified wth an electronic integrator.

RESULTS AND DISCUSSION

METEOROLOGY

Comparison of meteorological conditions during the three-month sampling period with the same period in previous years was necessary in order to determine whether the sampling results were influenced unduly by some abnormal weather condition. Since ambient temperature differentials are responsible for diffusion and wind flow, and temperatures have been recorded by the National Weather Service in the San Gabriel Valley for the past twenty years, this was selected as one of the meteorological variables to examine. Winds at the BKK site also determine the local transport of the contaminants. Therefore, the winds at Site A (because of its exposure to the landfill) were compared for this three-month sampling period to those recorded in 1981.

The temperature study indicated that there was no significant difference between the average temperatures recorded during this three-month period and the 20-year average for the same three-month period.

Frequency distributions for wind direction and speed were computed for the same three months in 1981 and 1982. Those directions which would impact Site A from the landfill were summarized. No significant difference was exhibited between the frequencies for 1981 and 1982.

AMBIENT AIR RESULTS

Table II summarizes all of the data collected during the study period. Chlorobenzene and trans-1,2-dichloroethene were not detected at any of the sampling stations during the study period, and are therefore not listed. The detection limits for each compound are shown in Table III. Statistical analysis of the split sample results revealed that the data from the two laboratories are not well correlated. The differences between the two laboratories was not unexpected, since the concentrations measured in this survey were close to the limit of detection of the analytical methods. Therefore the mean concentration for each compound was calculated separately for each laboratory and station. The first number of each pair merely represents the lower of the two means from the laboratories, and the second number is the higher mean value. Values reported as less than the limit of detection were set equal to the detection limit for purposes of calculating the mean concentrations. This treatment of the data allowed a conservative or worst case estimate of exposure for these compounds. It is recognized that in reality, these values can range anywhere from zero to the limit of detection.

The ratio of the mean ambient air concentrations at stations A-F (those station adjacent to the landfill) to the concentrations at the control station are shown in Table IV. These ratios were calculated separately for data from each laboratory.

Figures II through VIII show the ranges and means for each compound in a formatwhich allows the absolute concentration ranges to be plotted for each compoundstation, and laboratory during the study period.

DISCUSSION

It is apparent from Table IV that the mean concentrations at Stations A, B, and and D are consistently higher than those at the control station for all compounds except chloroform. At Station E, only TCE and ethylene dichloride appear consistantly to exceed the control station value. Satation F concentrations exceed control station averages for Perc, TCE and vinylidene chloride. These trends are also illustrated by Figures II through VIII. It should be noted that such large ranges in concentration are not a reflection of the impercision of the sampling and analytical methods, but are indicative of the wide daily fluctuations of concentrations in the air near the monitoring stations. It should also be noted that the data from station F are actually an equally weighted composite from two locations, F_1 and F_2. These observations suggest that the BKK landfill may be a significant source of emissions of these compounds into the community.

The levels of all compounds detected were consistently higher at stations A, B, and D than at Stations E and F. Since stations A, B, and D are located in areas where nightime air drainage from the landfill is know to occur, it is likely that these elevated concentrations can be attributed to this phenomenon. The low levels at stations E and F, which are located in areas not subject to the same flow patterns, further emphasize the importance of nightime air drainage as the primary mode by which landfill emissions impact the community. This type of air movement does not allow as much dispersion as that which occurs in the daylight hours.

DISCUSSION OF HEALTH EFFECTS

Introduction

What are the expected health effects from exposure to these substances at the concentrations observed in the area directly adjacent to the BKK landfill? For those substances that can give non-carcinogenic acute and chronic toxic effects, such as liver, kidney or nerve damage, for low concentrations there is good evidence for a biological threshold, or a "no observed effect level". This means that concentrations below this threshold do not cause adverse health effects. All of the substances, even at the highest observed concentrations, are believed to be present in concentrations well below their threshold for toxic, non-carcinogenic action. This gives a safety margin of from 100-to-1000 fold in the concentrations before these substances even approach levels which could cause adverse health effects. It is for this reason that this report concentrates solely on the risk of cancer.

Carcinogenic Risk Assessment

The chance of getting cancer is calculated using risk assessment techniques. Risk assessment is a science that predicts the probability or likelihood of an event occurring. It attempts to estimate the chances of cancer occuring in a specified population, from a specified dose of a substance in a given time period. Several facets go into risk assessment: the carcinogenic potency of the substance,calculation of dosage from exposure data and the number of people exposed (population at risk) and their individual dosages.

In order to evaluate the health impact of those emissions due to the BKK site, use was made of the simple difference of the concentrations, i.e., the average concentration of each substance in the Pico Rivera Station was subtracted from the average concentration of that substance in the residential monitoring site. Thus, the derived risks are considered excess risks, or risks in addition to those typically incurred away from the influence of the BKK landfill site.

The stations selected for monitoring were those that in the past gave very high concentrations, suggesting that they are in the path of a drainage channel. In the absence of information on the length, width and depth of the drainage areas, the dilution with distance (both lateral and down-hill), the concentrations of the initial drainages and the fraction of material that is carried by drainage and wind dispersions, it is not possible to accurately estimate either exposures or the population at risk. However, it is possible to estimate the upper limit or bound to this risk using a number of conservative assumptions. Some of the major assumptions are shown in Table V.

The lifetime incremental, worst-case estimated risk for residents adjacent to the BKK site, is based on the maximum possible period of exposure (24 hours/day, 7 days/week and 52 weeks/year). The exposures were projected from the observed 3-month monitoring period (August-October) for a maximum possible exposure period of seven years. Vinyl chloride is the only compound that air monitoring data is available for preceeding the current monitoring period. In order to adjust the data for both seasonal variations and to correct for the increased control measures that had been installed at the BKK site, the six other compounds were increased in proportion to their ratio to vinyl chloride for the prior monitoring periods.

These calculations suggest that the maximum possible excess risk, is approximately 5 per hundred thousand (5/100,000). This is the maximum increased lifetime risk of contracting cancer for those residents who have been subject to the emissions from the BKK landfill site for the past seven years. Thus, we can say with some certainty that the risk of getting cancer, attributable to exposure from emissions from the BKK landfil is no greater than this; while in fact, the true excess risk of cancer is probably lower.

Population Comparisons

The maximum individual excess risk can be better understood as applied to the exposed population. The accumulated individual excess risk multiplied by the population at risk (the number of people exposed to these concentrations) defines the maximum number of excess cancers expected during the lifetime of the exposed population. This results in an estimation of the additional cases of cancer expected during the lifetime of the exposed population due to the emissions from the BKK landfill site.

The total population, at distances of up to one mile from the BKK property line, were considered to be at risk (a total of approxmately 7700 people). This population was derived by dividing the assessor's plot maps into quadrants, corresponding to Monitoring Stations: A, B, D, and F. The population within each quadrant was estimated using the latest census data of 1980. The exposure of the population within each quadrant was assumed equal to that measured at the respective monitoring station. The total population within each quadrant was multiplied by the mean concentration difference for its respective monitoring station, and the derived excess number of cancers was summed.

These calculations suggest that there should be no additional cases of cancer attributable to exposure from emissions from the BKK landfill during the lifetime of the population from exposure to date.

The Department of Health Services has made a conscientious attempt to calculate the worst-case estimate of risk. In those cases where there are insufficient data, the most conservative assumptions were used. As further information becomes available, such as, drainage patterns and dispersion rates, this additional data will be incorporated into the risk calculations. Although a small possibility exists that further information might increase the risk estimate, to the best of our knowledge, this new information should lower our worst-case risk estimates and provide a more accurate and realistic indication of risk.

It is important that the provided risk estimates NOT be considered as static or "as engraved in stone." They are expected to change as further information become available. These revisions will be made to better refine the risk and not to obscure the true impact. Such refinements wil be communicated to the residents of West Covina as they become available.

Several critical points should be kept in mind:

1. Since the biological mechanism of cancer is not known, mathematical models can only provide a best scientific "guess" of the dose-response relations at dosages much less than those employed in the bioassays. However, it is believed that at very low dosages, the shape of the dose-response curve is concave upward. Thus, a linear model will provide the upper-limit for the risk for the experimental observations (see Figure 1X).

2. The use of the upper-confidence values for the experimental results, then provides an added margin of safety to insure that the upper-risk level is also based on the maximum possible number of cancers that statistically could occur from the experimental studies (see Figure X).

3. It is not possible to calculate the actual risks at these low concentrations. Thus, it is very important that people understand that the presented risk numbers only represent the worst possible risk. It is expected that the true risks are lower than these numbers

4. These worst-case estimates of risk suggest that there should be no additional cases of cancer due to exposure to the emissions from the BKK landfill. The Department of Health Services does NOT recommend any special medical precautions or treatment for those residents adjacent to the landfill site.

TABLE I. COMPOUNDS SELECTED FOR MONITORING

COMPOUND (SYNONYM)	USES AND PROBABLE WASTE SOURCES	CONCENTRATION RANGE IN LANDFILL GAS (ppm)
Chloroethene (Vinyl Chloride)	Manufacture of PVC and other co-polymers; organic synthesis; adhesives for plastics; refregerant; manufacture of vinyl chloride also a significant waste source.	83 - 12800[a]
1,1 - Dichloroethene (Vinylidene Chloride)	Copolymerized with vinyl chloride to manufacture types of saran; adhesives for synthetic fibers.	N.D. - 1200[b]
Trans-1,2-Dichloroethene (Acetylene Dichloride)	General solvent for organic materials, dye extraction, perfumes, lacquers, thermo-plastics, organic synthesis.	N.D. - 800[b]
Trichloroethene (TCE)	Metal degreasing, extraction solvent for oils, fats, waxes; solvent dyeing; dry cleaning; refrigerant and heat exchange fluid; organic synthesis; fumigant; cleaning and drying electronic parts.	N.D. - 1000[b]
Tetrachloroethene (Perc)	Dry cleaning solvent; vapor-degreasing solvent; drying agent for metals; heat exchange medium; manufacture of fluorocarbons.	N.D. - 1500[b]

TABLE I (CONTINUED)

COMPOUND (SYNONYM)	USES AND PROBABLE WASTE SOURCES	CONCENTRATION RANGE IN LANDFILL GAS (ppm)
1,2-Dichloroethane (Ethylene Dichloride)	Manufacture of vinyl chloride; organic synthesis; anti-knock agent in gasoline; paint, varnish, and finish removers; metal degreasing; soaps and scouring compounds; wetting and penetrating agent; ore flotation.	N.D. - 5000[b]
Trichloromethane (Chloroform)	Manufacture of fluorocarbon refrigerants and propellants; dyes & drugs; general solvent; fumigant; insecticides.	5.1[c] 0.038 (Ambient air)[d]
Benzene	Manufacture of styrene, phenol, synthetic detergents, cyclohexane for nylon, aniline DDT, various other insecticides, funigants; solvent; paint remover; rubber cement; anti-knock agent in gasoline.	10 - 2000[b]
Chlorobenzene	Manufacture of chloronitrobenzene, DDT, aniline; intermediate and solvent for organic synthesis.	N.D. - 500[b]

Footnotes:

a. Analytical Research Laboratories, Inc. "Report for BKK/Stauffer Chemical." June 17, 1981.

b. Euteck, Inc. "BKK Landfill Odor Study Final Report." Prepared for City of West covina. February 27, 1981.

c. South Coast Air Quality Management District. "Report on Vinyl Chloride Emissions from a Class I Landfill Operation." Source Test Report C-81-96 A & B. June 10, 1981.

d. University of Southern California. "Investigation of Odorous and Volatile Compounds for BKK Class I Landfill Site in the City of West Covina." Prepared for BKK Corporation. July, 1981.

TABLE II

Summary of Ambient Air Data[a] (ppb)

	Station					
	A	B	C	D	E	F
Chloroethene (Vinyl Chloride	7.1-7.3	4.5-5.5	2-3	3.8-4.1	2.0-3	2-3
Tetrachloroethene (Perc)	2.1-3.7	1.8-2.9	1.4-2.4	2.3-3.0	1.5-2.1	1.5-3.4
Trichloroethene (TCE)	0.8-1.0	0.8-1.8	0.2-0.3	1.6-1.7	0.6-0.8	0.8-1.2
1,1-Dichloroethene (Vinylidene Chloride)	1.1-1.3	0.7-1.0	0.1-0.3	0.7-0.8	0.1-0.4	0.3-0.4
1,2-Dichloroethane (Ethylene Dichloride)	1.3-3.0	0.8-2.8	0.4-0.7	0.8-2.8	0.7-0.9	0.4-1.1
Trichloromethane (Chloroform)	0.3-0.5	0.3-0.6	0.2-0.6	0.6-1.0	0.2	0.2
Benzene[b]	4.8	4.6	3.6	4.6	3.0	3.0

a. Each pair of values represents the means of the two laboratory data sets calculated for the entire study period. On those days when a compound was not detected, its concentration was assumed to be equal to the limit of detection.

b. One set of data used. All of the second set were below the limit of detection.

TABLE III

Detection Limits for Compounds

Compound	Range of Detectability (ppb)
Chlorethene (Vinyl Chloride)	2-3
Tetrachloroethene (Perc)	0.1-0.2
Trichlorethene (TCE)	0.1-0.2
1,1-Dichloroethene (Vinylidene Chloride)	0.1-0.3
1,2-Dichloroethane (Ethylene Dichloride)	0.2-0.4
Trichloromethane (Chloroform)	0.02-0.1
Trans-1,2-Dichloroethene	1-3
Chlorobenzene	10[a]
Benzene	2-20

[a] Sampling by charcoal tube and analysis by one laboratory.

TABLE IV

Ratio of Ambient Air Concentrations of Station A-F to Control Station Station C[a]

	Station					
	A	B	C	D	E	F
Chloroethene (Vinyl Chloride)	2.4-3.6	1.8-2.3	1.0	1.4-1.9	1.0	1.0
Tetrachloroethene (Perc)	1.5	1.2	1.0	1.2-1.6	0.9-1.1	1.4-2.1
Trichloroethene (TCE)	2.9-3.9	3.0-7.2	1.0	6.3-6.6	2.1-3.0	2.8-5.0
1,1-Dichloroethene (Vinylidene Chloride)	3.6-11	2.4-9.3	1.0	2.7-6.5	1.0-1.3	1.5-3.0
1,2-Dichloroethane (Ethylene Dichloride)	3.3-4.5	1.9-4.3	1.0	1.9-4.3	1.3-1.7	1.0-1.7
Trichloromethane (Chlorform)	0.4-2.7	1.0-1.4	1.0	1.7-3.1	0.4-1.1	0.4-1.0
Benzene[b]	1.4	1.3	1.0	1.3	0.8	0.8

a. Ratios are calculated for each laboratory separately and expressed as a range.

b. One laboratory data set available.

Table V

Conservative Assumptions used by the California Department of Health Services to Estimate Cancer Risks from BKK Emissions

Animal Bioassay Studies

1. Use the most sensitive site, sex and animal species.
2. Use the upper 95.7% confidence value for the experimental data.
3. Assume all tumors (benign and malignant) are indicators of carcinogenic risk.
4. Use linear extrapolation for determining the risks at low dosages.

Individual Risk Estimates

1. Use the measured concentration for each station as the human exposure, with no allowance for dilution with distance (down-wind or laterial).
2. Assume an exposure for a full 24 hours/day, 7 days/week, and 52 weeks/year (with no allowance for leaving residence or air conditioning in residence).
3. Assume 100% absorption for human exposure.
4. Selection of monitoring stations in drainage pathways.

Population at Risk

1. Assume maximum housing tract population at time of issuance of permit to occupy.
2. Assume exposure from measured value at each monitoring Station with no allowance for dilution with distance (down-wind or laterial).
3. No allowance for population being outside of expected drainage patterns.

FIGURE I

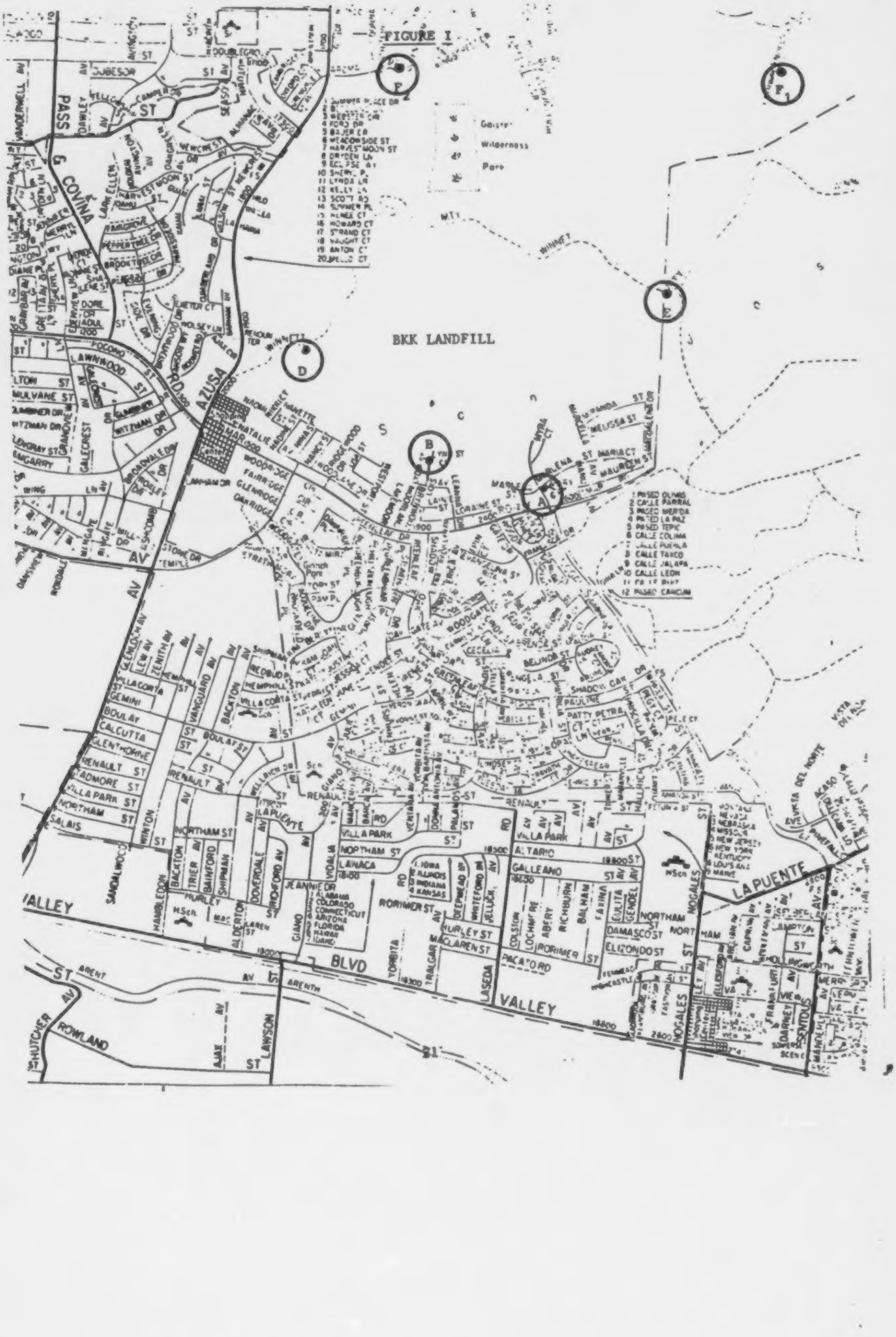

BKK LANDFILL
A
B
C
D
E
F
F1
Galster Wilderness Park
AZUSA
PASS & COVINA
RD
VALLEY BLVD
LAPUENTE
NOGALES ST
AMAR RD
RENAULT ST
NORTHAM ST
VILLA PARK
LAWSON
ROWLAND
HUTCHER AV
WINNET
S
C
21

Figure II

Range and Mean for Vinyl Choride Monitoring

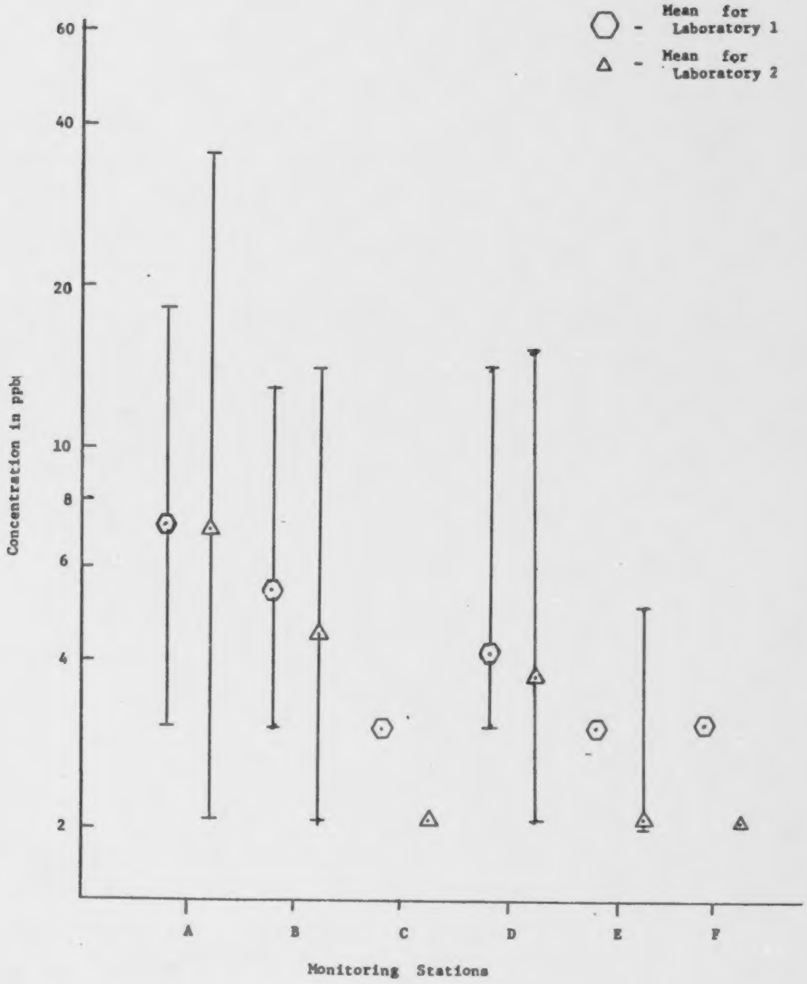


FIGURE III

Range and Mean for Trichloroethylene (TCE)

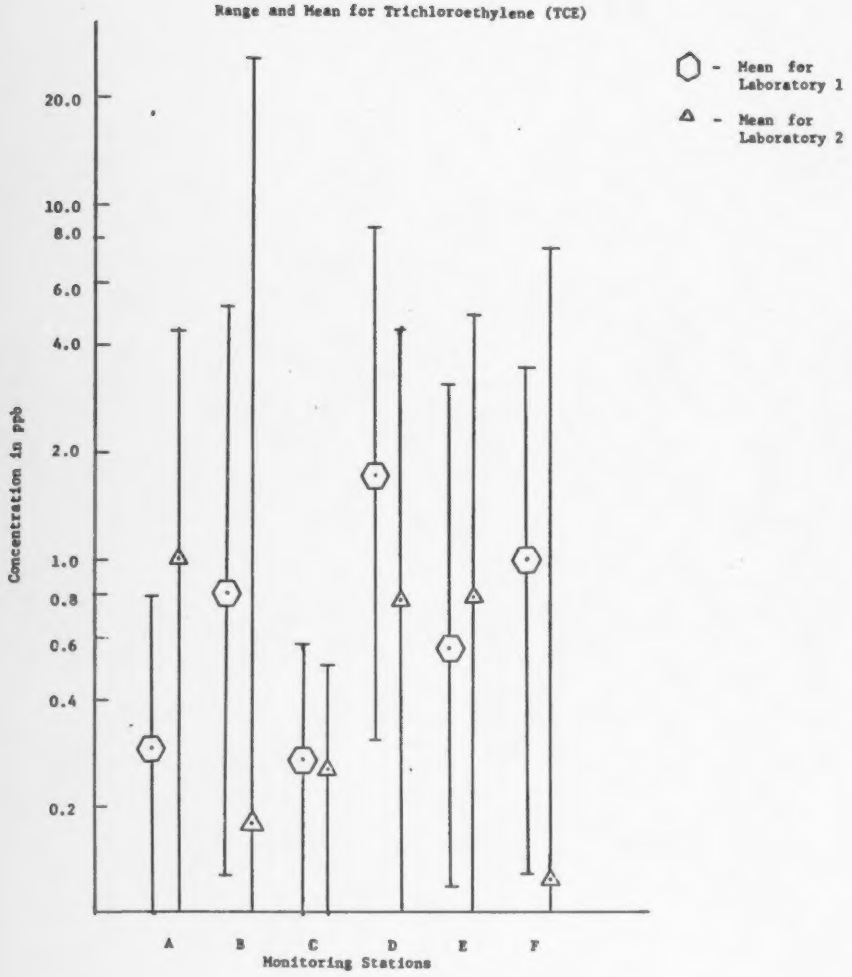


FIGURE IV

Range and Mean for Perchloroethylene (Perc) Monitoring

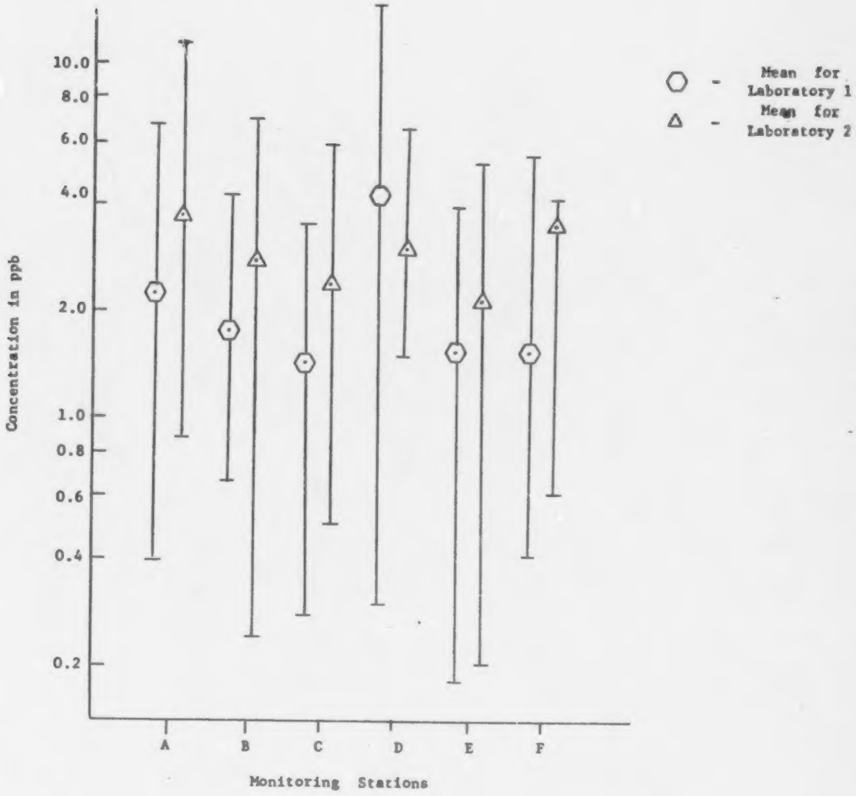


FIGURE V

Range and Mean for 1,2-Dichloroethene (Vinylidene Chloride)

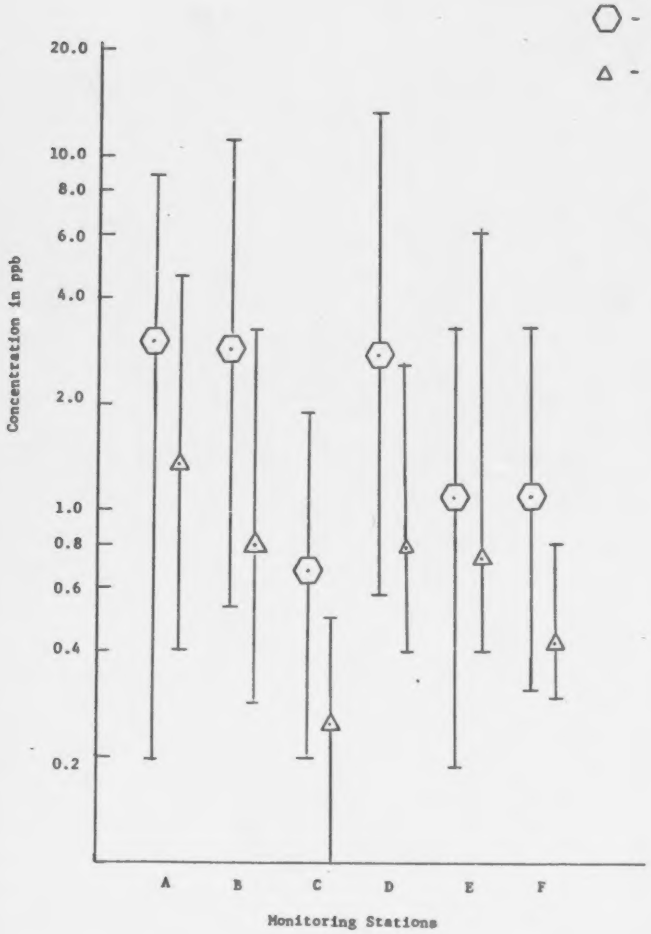


FIGURE VI

Range and Mean for 1,1-dichloroethane (Ethylene Chloride)

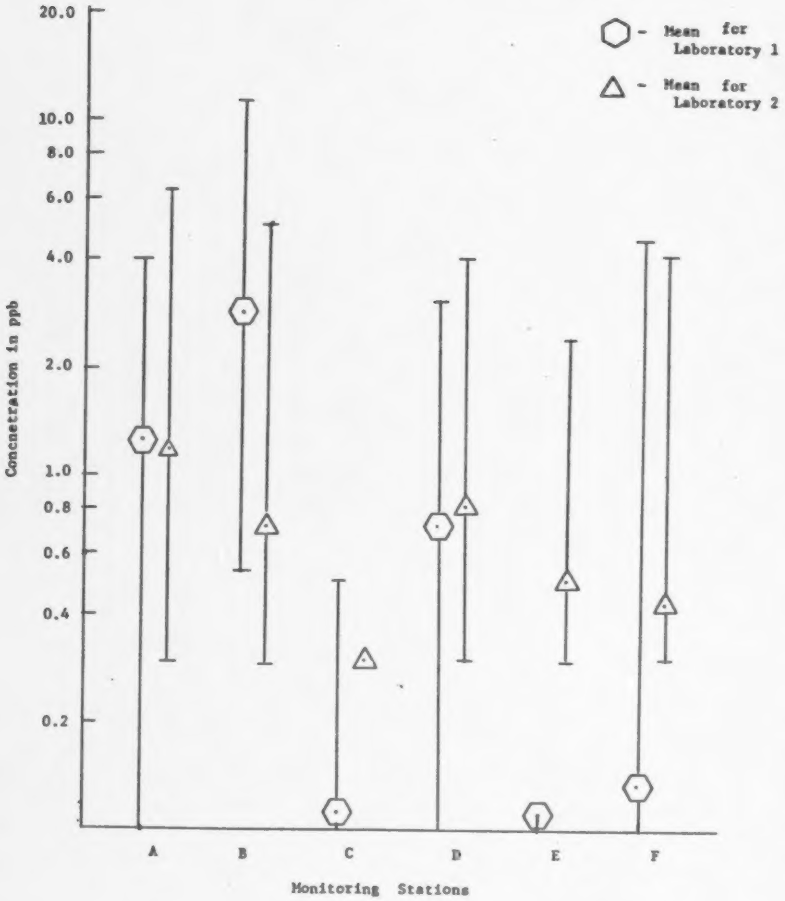
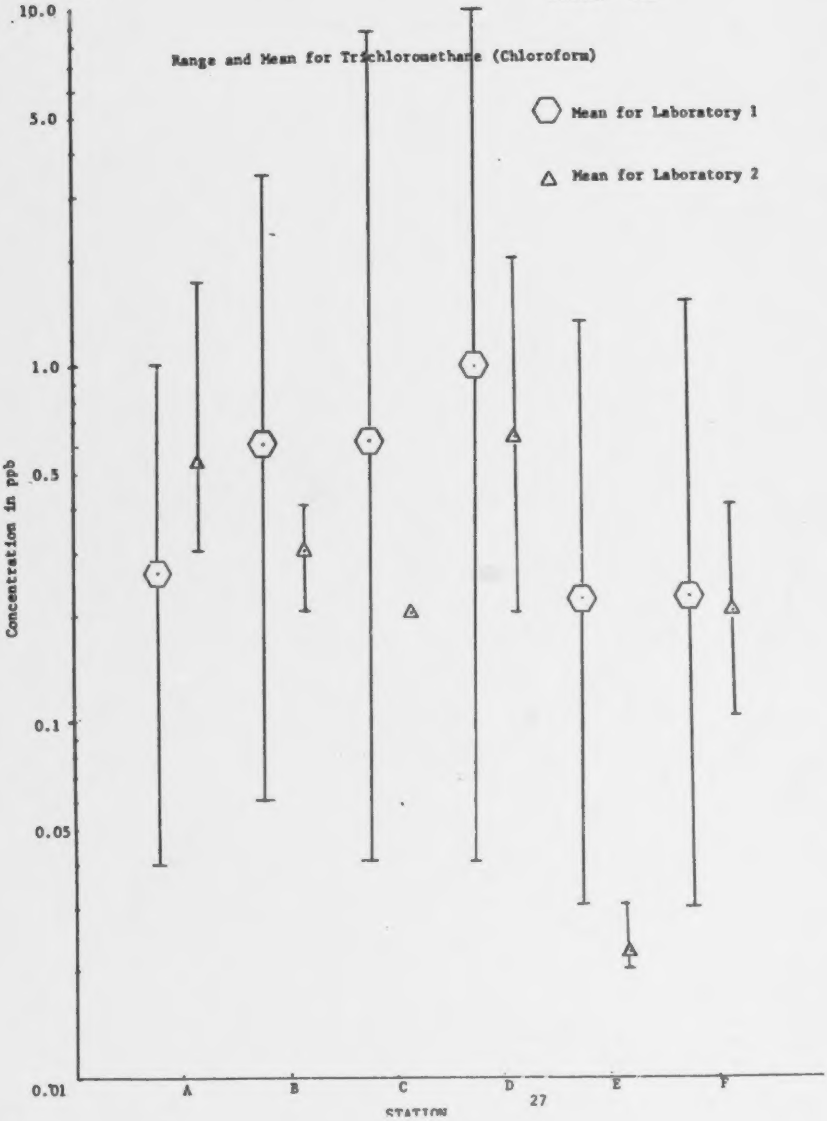


FIGURE VII



Range and Mean for Trichloromethane (Chloroform)

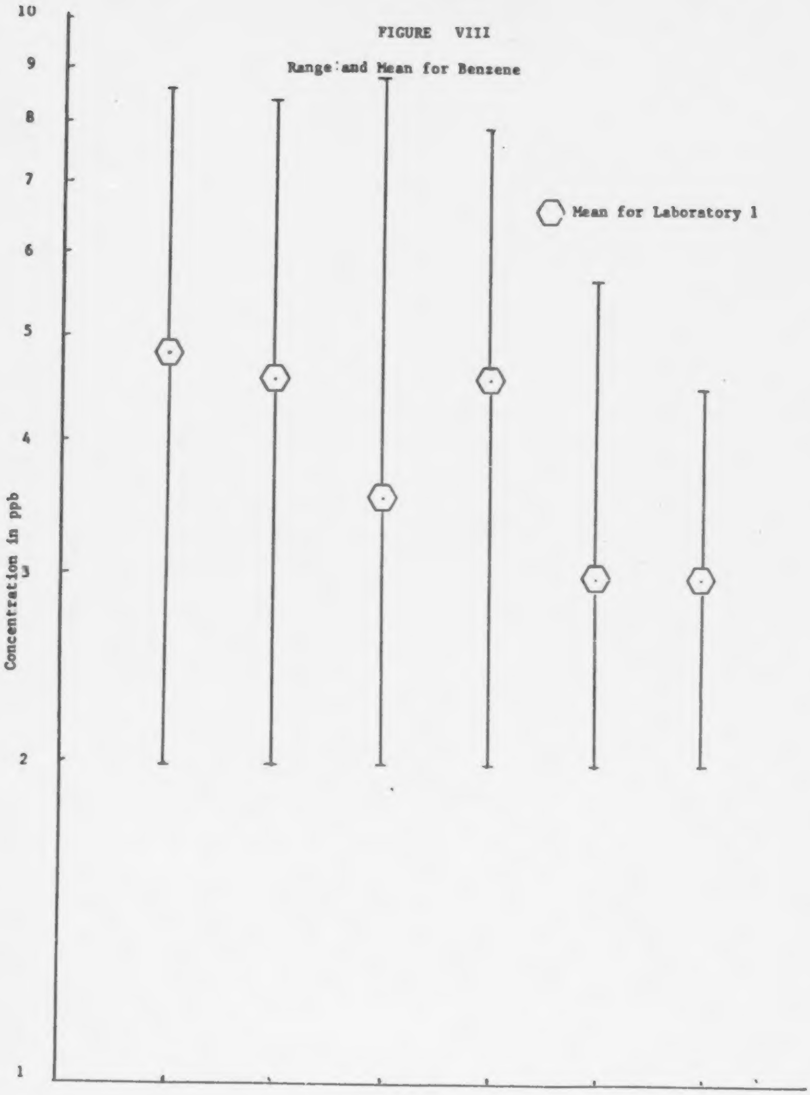


FIGURE VIII

Range and Mean for Benzene

FIGURE IX

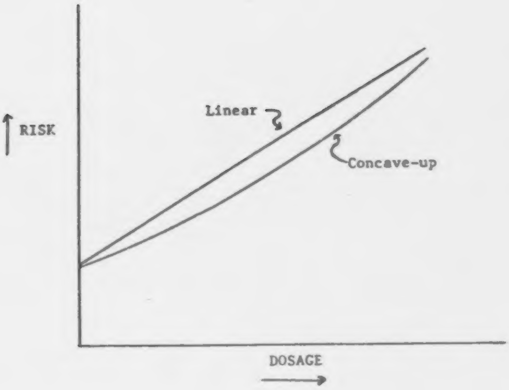
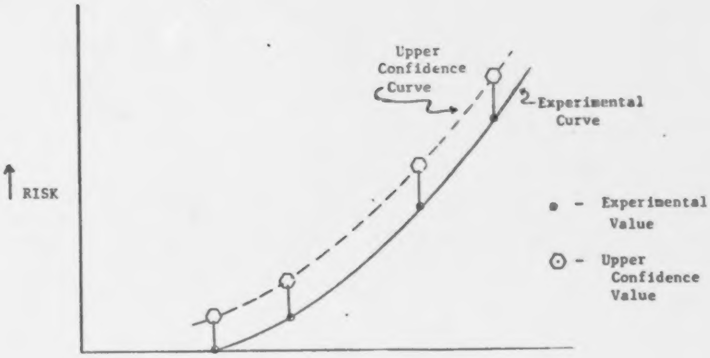


FIGURE X



City of WEST COVINA *California*
1444 WEST GARVEY AVENUE • 91790 • AREA CODE 213 • 962-8631

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 28, 1983

Mr. William D. Dawson, Interim Director
California Department of Health Services
714 "P" Street - Room 1253
Sacramento, California 95814

Dear Mr. Dawson:

On April 25, 1983, the City Council of the City of West Covina adopted Resolution No. 6683 (attached), demanding that the California Department of Health Services notice and hold a public hearing pursuant to Health and Safety Code Section 25149, and determine whether the operation of the BKK Landfill may present an imminent and substantial endangerment to the health and environment of the residents of West Covina.

This action was precipitated by the recent report on the "Ambient Air Monitoring and Health Risk Assessment for Suspect Human Carcinogens Around the BKK Landfill in West Covira" and the April 7, 1982, public meeting conducted by the California Department of Health Services on this report. Both the report and the meeting raised serious questions as to the risk to the public's health and the environment as a result of the BKK Landfill operation. The complete operation of this facility must be reviewed and a determination made about the endangerment to the public health and the environment.

It is requested that the California Department of Health Services advise the City, in writing, within thirty (30) days of receipt of this letter as to when and where the public hearing will be held pursuant to the above. If you have any questions, please call Michael Miller, Environmental Services Director at (213) 962-8631, extension 201.

Yours truly,

Kenneth I. Chappell

Kenneth I. Chappell, Mayor
City of West Covina

KIC:ls
Attachments - (1) Copy of Resolution No. 6683.
(2) List of those carbon-copied.

TE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

GEORGE DEUKMEJIAN, Governor

EPARTMENT OF HEALTH SERVICES

/744 P STREET
CRAMENTO, CA 95814

.6) 324-1826

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City of West Covina

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CITY MANAGER
CITY OF WEST COVINA
JUN 27 1983
[illegible]

June 22, 1983

Honorable Kenneth I. Chappell
Mayor of the City of West Covina
1444 West Garvey Avenue
West Covina, CA 91790

Dear Mayor Chappell:

Your letter to Mr. William Dawson regarding the West Covina City Council's demand for the Department of Health Services to hold a public hearing on the BKK landfill has been referred to me for reply. I apologize for the delay in responding to your concerns.

After careful review of the March 1982 report prepared jointly by the Department, the Air Resources Board, and the South Coast Air Quality Management District, the Department has determined that the operation of the BKK landfill does not present an imminent and substantial endangerment to health and the environment. As a result of the public hearing held in April, we have prepared a detailed response to a series of questions from the community to Councilman Herb Tice. A copy of that response is enclosed for your information.

Although I share your concerns about the safe and effective disposal of hazardous waste at the BKK landfill, there is no justification for further actions based on imminent and substantial endangerment. I can assure you that this Department will take whatever action is necessary to protect the public's health and safety against the hazards of toxic wastes.

Sincerely,

Richard B. Wilcoxon

Richard P. Wilcoxon, Chief
Toxic Substances Control Division

Enc.

TATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
714/744 P STREET
ACRAMENTO, CA 95814
916) 324-1826

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City of West Covina

JUN 30 1983

Mr. Michael L. Miller
Environmental Services Director
City of West Covina
P. O. Box 1440
West Covina, CA 91793

Dear Mr. Miller:

This is in response to the June 17 letter from Mayor Chappell to the Director requesting the Department to hold a public meeting to discuss the BKK landfill.

First, let me apologize for taking so long to respond to the April 15 letter. However, because of its length and complexity, I wanted to be assured that our response was specific and accurate. I should have written an interim response indicating we were working on that letter and will do so in the future should a similar situation arise.

Based on our June 22 response to Mayor Chappell and our June 22 response to City Councilman Herb Tice, there does not appear to be any need for a meeting with the residents of West Covina. However, if you have any specific questions or concerns, please let me know.

Sincerely,

Richard P. Wilcoxon

Richard P. Wilcoxon, Chief
Toxic Substances Control Division

TELEGRAM TO: September 27, 1983

Richard P. Wilcoxon, Deputy Director
Division of Toxic Substances Control
California Department of Health Services
1219 K Street, 3rd Floor
Sacramento, CA 95814

and

Joel Moskowitz, Deputy Director
Toxic Substances Control Program
Department of Health Services
714 P Street, Room 1253
Sacramento, CA 95814

West Covina meeting with reps of EPA and DOHS on 27 September 83, excellent preliminary discussion.

Future communication with West Covina on BKK matters assured by both agencies. Corrections of violations noted in EPA inspection report, apparently being pursued. Meeting discussion confirmed necessity and urgency of meeting between West Covina officials and Messrs. Moskowitz and Wilcoxon to discuss urgency need and dynamics of requested SB 501 hearing. City officials will be in San Francisco on other business and available to meet a.m. 3 October 83 or all day 4 October 83. Use Michael Miller as City contact for meeting arrangements.

Again urgently, respectfully request attendance of Moskowitz and Wilcoxon.

Mayor Kenneth I. Chappell
City of West Covina
P.O. Box 1440
West Covina, CA 91793

cc: Harry Seraydarian, Director EPA
Angelo Belomo, DOHS
City Council
Michael Miller

AGENDA

Date 10-10-83 Item No. A-1a

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

SEP 1983
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[illegible]
City of West Covina

27 SEP 1983

Michael L. Miller
Community Services Director
City of West Covina
P. O. Box 1440
West Covina, CA 91793

Dear Mr. Miller:

This letter is in response to your telegram regarding BKK. The State Department of Health Services (DOHS) has been delegated the enforcement authority for the hazardous waste management requirements dictated by the Resource Conservation and Recovery Act (RCRA) now applicable at BKK. Whenever EPA detects RCRA violations, a notice of violation, pursuant to Section 3008 of RCRA is sent to DOHS. The state has the responsibility to investigate the apparent violations further and to take action to correct the violations. As their investigation may confirm certain violations and amend or add others, we provide the notice solely to the State.

In the BKK case, the State agreed that the Notice will require follow-up and attempted to notify all interested parties of the on-going investigation via press release issued on August 25, 1983 (attached). However, we understand the special situation of the City of West Covina and will send you copies of such notices and related matters for BKK in the future.

Your telegram asked for a full explanation of the meaning and implications of the notice letter and inspection report. In response to the notice, DOHS intends to take acton in the immediate future to correct the violations. We do not have any evidence at this time, however, that a health threat is associated with the violations noted. The EPA inspection did not involve sampling of the ground water and no new information concerning ground water quality was obtained. Off-site contamination was not investigated or detected. We anticipate that new wells will be located in the immediate future and extensive ground water studies commenced in response to the state's impending action and the requirements for a RCRA permit. These studies will be designed to insure and demonstrate that all waste will remain on-site.

I understand your concern with the compliance status of the BKK Landfill and will request my staff to keep you informed of significant enforcement activity as it occurs.

Sincerely yours,

Harry Seraydarian
Director
Toxics & Waste Management Division

cc: Angelo Bellomo, DOHS - Sacramento
John Hinton, DOHS - LA

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES

714/744 P STREET
SACRAMENTO, CA 95814
(916) 324-1826

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City of West Covina

AGENDA

Date 10/24/83 Item No. A-1a

October 7, 1983

Mr. Colin Lennard
Burke, Williams and Sorensen
717 Wilshire Blvd., Suite 3300
Los Angeles, CA 90017

Dear Mr. Lennard:

Thank you for your recent letter which requested this Department to conduct a hearing to determine whether the BKK Landfill in West Covina presents an imminent and substantial endangerment to the health and environment of the residents of that community. My staff has thoroughly evaluated each of the listed concerns presented in your letter.

After careful review of the facts presented to me, it is my position that current information does not establish that the landfill presents an imminent and substantial endangerment to public health and the environment. Accordingly, I find that a public hearing pursuant to Section 25149, Chapter 6.5, Division 20, California Health and Safety Code, is not presently warranted.

As you know, we have recently amended the facility's Interim Status Document and are requiring BKK to conduct a number of studies. If, as a result of these studies, there is any information which suggests a need for a public hearing, I will reevaluate my position in this matter and so inform you.

Enclosed is the response to each of the concerns raised in your letter. Please contact me if I can be of further assistance.

Sincerely,

Richard P. Wilcoxon

Richard P. Wilcoxon, Chief
Toxic Substances Control Division

Enclosures

cc: Joel Moskowitz

ATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY
GEORGE DEUKMEJIAN, Governor

EPARTMENT OF HEALTH SERVICES
14/744 P STREET
ACRAMENTO, CA 95814

BKK LANDFILL OPERATIONS: Concerns presented by Mr. Colin Lennard about the site in a letter dated August 19, 1983, and corresponding responses from the Deputy Director, Toxic Substances Control Programs:

1. "In 1980, we were told by State Health officials that BKK does not endanger the public. In 1982, we were told that the lifetime health risks due to vinyl chloride were 1 additional case of cancer for every 100,000 people exposed to the emissions. In 1983, we were told that seven years' health risk for the nine suspect carcinogens was 1 additional cancer case for every 20,000 people exposed to the emissions. This is an alarming increase in risk, is not comparing equals (seven years vs. a lifetime), and far exceeds the public health goal of 1 in a million."

Response:

The Department had consistently stated that the carcinogenic risk of the emissions from the BKK landfill are so low that we would not expect to see any additional cancer among the residents living near the site. The original carcinogenic risk assessment presented to the community in July 1982 addressed vinyl chloride because that was the only substance monitored. Only seven years of exposure were used in the risk assessment since the homes adjacent to the site were constructed within the past seven years. The added lifetime carcinogenic risk from vinyl chloride was about 1 in 100,000 for those seven years.

Because other carcinogens were found to be present in the landfill gas (although at lower concentrations than vinyl chloride), additional emissions monitoring was conducted July - October 1982. The combined added risk of the vinyl chloride and other carcinogens for the same seven-year period for a "worst case" scenario was about 5 per 100,000. These data are not in conflict as implied in the letter.

Monitoring conducted since October 1982 shows a downward trend in the number of exceedences of the vinyl chloride standard, indicating that the risk from the compound is diminished. It is the Department's judgement that the relatively low level of emission is not a significant public health risk.

It is true that the estimated risk exceeds the Department's public health goal of 1 in 1 million added risk from an involuntary community exposure. Accordingly, the Department in cooperation with other agencies is evaluating the propriety of additional environmental controls and requirements at the facility.

2. "In 1980 and until recently, we were told by State Health officials that PCB's cannot be disposed of at a Class I landfill. Earlier this year, we reviewed hazardous waste manifests that indicated PCB-contaminated soil, at a concentration of 49 ppm, was buried at BKK. We were then told by State Department of Health Services officials that PCB-contaminated soil up to 50 ppm can be disposed of in this manner. The accuracy of the 49 ppm is even questionable".

Response:

The Department formalized its policy concerning the management of PCB-contaminated wastes at various concentration levels in 1981. It provides that PCB-contaminated wastes at concentrations between 7-50 ppm must be managed as hazardous waste and its disposal may be at any Class I site. PCB concentrations of 50 ppm and above are hazardous wastes and disposal may only be to an EPA-approved site. The BKK landfill is not an EPA-approved site for disposal of PCBs at 50 ppm and above. It should be noted here that EPA does not regulate wastes if the PCB concentration is less than 50 ppm.

3. "In 1980, we were told that the State has a "tracking" system for hazardous wastes, from production to disposal. Earlier this year, we informed the State Health Department of alleged illegal dumping of low-level radioactive wastes from the San Diego area at BKK. To date we have no information from the State confirming or denying that such a producer exists; such waste was so disposed of; or that the tracking system works. Is this going to be another PCB-contaminated soil? The tracking system does not seem to be working; thus, one must conclude that unauthorized wastes are being disposed of at BKK".

Response:

We have no evidence to suggest that any low-level radioactive waste has been disposed at BKK either from San Diego or any other location in the State. In this regard, low-level radioactive waste disposal is regulated by the Department's Radiologic Health Branch and we have received no information from that unit of any illegal radioactive waste disposal.

4. "In 1980, there was no testing of runoff from BKK. Subsequently, tests were made in 1983 elevated levels of chloroform were found. There has never been any explanation, satisfactory or unsatisfactory, of why this level was found".

Response:

In a letter dated May 2, 1983, the Regional Water Quality Control Board, Los Angeles Region, informed the Department that studies by that agency conducted in 1981 and 1982, disclosed no "significant pollution" observed in storm runoff from the landfill. This Department and the Regional Water Quality Control Board have no record for any storm runoff testing that showed "elevated levels of chloroform".

5. "In 1980, commingling of wastes was acceptable to the Department. Now there is a State program to phase out six high-priority hazardous waste groups, not just volatile organics, indicating that commingling is not a good practice".

Response:

California's phase-out of certain hazardous waste streams from land disposal is not resulting from the "unacceptability" of commingling liquid hazardous wastes with refuse. Rather, California recognized the need to change from dependence on land disposal, to treatment, destruction or recycling of specific hazardous wastes that are highly toxic, persistent, bioaccumulative, and mobile in the environment. It is primarily through this phase-out program that the development of such alternatives is expected to be stimulated.

6. "The answers to our questions on the air emissions report indicate it is the volatile liquids that are creating the emissions, not the solid wastes with which they are commingled. If the gas from decomposition can transport contaminants, one can conclude that this gas transports the suspect carcinogens. This contradicts the Department's representations".

Response:

The Department agrees that the landfill gas generated by the municipal solid wastes plays a role in causing emissions of volatile compounds. As indicated in the responses to questions 16 and 17 in our letter to Councilman Herb Tice (June 22, 1983), the Department agrees that it is not appropriate to dispose of such volatile liquids to land. The type of waste responsible for causing the emissions will be restricted from land disposal as of January 1, 1985. This phase-out is contingent upon the availability of feasible alternatives and the Department is confident that these alternatives will be available by this date.

7. "In 1980, we were told there is no law or requirement for the testing of water wells for specific chemicals disposed of at BKK. There still is no such requirement. Yet the State continues to say, as they did in 1980, there is no contamination of wells by BKK.

Response:

Currently, the Department has no information which indicates contamination of water wells traceable to the landfill operations. To assure groundwater is not contaminated, amendments to the BKK's Interim Status Document were issued on September 26, 1983 which mandate numerous tasks including a comprehensive groundwater monitoring program.

ATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

GEORGE DEUKMEJIAN, Governor

EPARTMENT OF HEALTH SERVICES

14/744 P STREET
ACRAMENTO, CA 95814

916) 324-1826

NOV 1983
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City of West Covina

October 28, 1983

Mr. Michael L. Miller, Manager
Community Services Division
City of West Covina
P. O. Box 1440
West Covina, CA 91793

Dear Mr. Miller:

This is in response to your telegram requesting an explanation of the meaning and implications of EPAs letter to the Department concerning alleged RCRA violations at the BKK landfill. You also requested an explanation on the delay in informing the City of EPAs letter and its findings.

The Department issued a press release on the matter on August 25, 1983 documenting our intent to notify all concerned. I appreciate the City's position and have proposed to Mayor Chappell that the City and this Department conduct a community meeting in the latter part of November 1983 to present to interested residents the actions the Department is presently undertaking at this site.

In your telegram you also asked specific questions relative to the BKK landfill. Following are our responses to each question.

1. Is leachate leaving the landfill site?

   Response: The Department has no evidence that leachate is leaving the site. On September 26, 1983 the Department amended the landfill's Interim Status Document (ISD)(enclosed) which provided for the extraction of shallow groundwaters within and immediately downgradient of Barriers 1 and 2. On October 7, 1983 the landfill commenced the extraction activity and is currently operating the pump units 24 hours a day, 7 days a week, to provide added assurance that leachate does not migrate off site.

2. Is there contamination of groundwaters?

   Response: There does not appear to be any contamination of the shallow groundwater. The BKK landfill monitors shallow groundwater through wells located below the site's Barriers 1 and 2. These wells were installed pursuant to requirements from the Regional Water Quality Control Board (RWQCB). The Department, in conjunction with the RWQCB, has required BKK to increase the monitoring frequency of these groundwaters.

Concerning deeper, usable groundwaters downgradient of the landfill, the results of a water quality survey conducted in early 1983 by the RWQCB through sampling of several production wells in the area disclosed no contamination.

3. Is there now or a potential for a health hazard that impacts our residents?

   Response: While there is always a "potential" for a health hazard, we have no evidence that any hazard now exists.

4. What enforcement actions will be taken on these violations?

   Response: We are currently in settlement negotiations with BKK on these violations. If settlement cannot be reached, formal enforcement action will be initiated.

5. What will be done to protect the health of our residents?

   Response: The Department will take whatever action is necessary to protect public health and the environment. The Department's recent actions concerning the landfill are all directed toward that objective.

Sincerely,

Richard P. Wilcoxon

Richard P. Wilcoxon, Chief
Toxic Substances Control Division

Enclosure

cc: Environmental Protection Agency, Region IX
Regional Water Quality Control Board

[illegible] CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, Governor

EPARTMENT OF HEALTH SERVICES
4/744 P STREET
CRAMENTO, CA 95814
(916) 324-1826

MAY 3 1984

The Honorable Robert Bacon
Mayor of the City of West Covina
1444 West Garvey Avenue
West Covina, CA 91793

AGENDA
ITEM No. B-1f
DATE: May 14, 1984

Dear Mayor Bacon:

This is in response to your April 23, 1984 letter to Mr. Peter Rank, Director of the Department of Health Services. In your letter you requested that the Department reconsider our previous denial of a public hearing related to the BKK Landfill under the provisions of Section 25149 of the Health and Safety Code.

Based on the available information, I must again deny your request for such a hearing. Although laboratory analyses have indicated migration of hazardous substances beyond the Class I disposal area boundary, migration detection is within the BKK property boundaries. BKK has been restricted to disposal of hazardous waste in a limited area apart from the southeast portion of the landfill. BKK has been ordered, effective May 2, 1984, to solidify all hazardous liquid wastes prior to disposal which will minimize further migration. Close monitoring of air and groundwater quality is currently being performed by the involved agencies, and remedial measures have been initiated. The findings to date do not represent an immediate threat to nearby residences.

Since there is no available evidence to substantiate "that the operation of the facility (BKK) may present an imminent and substantial endangerment to health and the environment", a public hearing as prescribed in Section 25149 of the Health and Safety Code is not warranted at this time. If at any future date such conditions do exist, this Department will immediately initiate appropriate action.

Thank you for your appreciation of the decisive nature of our recent actions.

Sincerely,

Richard P. Wilcoxon

Richard P. Wilcoxon, Chief
Toxic Substances Control Division

LAW OFFICES
BURKE, WILLIAMS & SORENSEN
SUITE 3300
707 WILSHIRE BOULEVARD
LOS ANGELES, CALIFORNIA 90017

TELEPHONE
[illegible]

HARRY C. WILLIAMS
[illegible]
ROYAL M. SORENSEN
[illegible]

OF COUNSEL
DWIGHT A. NEWELL
GEORGE W. WAKEFIELD

July 26, 1984

EXPRESS MAIL

Judith E. Ayres
Regional Administrator
Environmental Protection Agency
Region 9
215 Fremont Street
San Francisco, California 94105

Re: BKK Corporation

Dear Ms. Ayres:

On behalf of Mayor Bacon and the City of West Covina, I would like to thank you for meeting with us on such short notice this morning. I hope this meeting was beneficial in helping you to understand the very serious concerns the City has with the present operation of the BKK Landfill.

As you are aware, Mayor Bacon requested that EPA take five specific actions relating to the ongoing problems surrounding the operation of the BKK Landfill. Those requested actions are as follows:

(1) That EPA immediately assume a lead agency role in the ongoing regulatory activities which are now being handled by several independent Federal, State and local agencies.

(2) That EPA immediately modify its order (Docket No. 84-13) dated 7/21/84 "In the Matter of BKK Corportion" so as to make said administrative order applicable to the southeastern portion of the Landfill site in order to address the present gas and/or leachate migration problems which have been recently identified.

JUL 1984
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City of West Covina

(3) That EPA immediately modify its administrative order referred to above by amending paragraph 5 of said order (page 18, lines 3-21) so as to provide that the City of West Covina will carry out and implement the actual temporary relocation of families or persons while at the same time still requiring BKK to assume all costs of such relocations.

We believe such an amendment will only clarify and speed up what is already a very painful process for those relocated persons. Suggested draft language will be sent to you under separate cover.

(4) That EPA by appropriate correspondence support the City's position that the State DOHS should immediately proceed with holding a "501 hearing" under the provisions of Section 25149 of the California Health and Safety Code. We believe that your Agency's own determination on page 12 of the administrative order (lines 6-9) leaves no doubt that such a hearing is now required.

(5) That EPA immediately file an action in Federal Court under the provisions of Section 106 of "CERCLA" for injunctive relief against BKK Corporation in order to insure that no endangerment to the public health, welfare and environment is emanating as a result of the operation of the BKK Landfill.

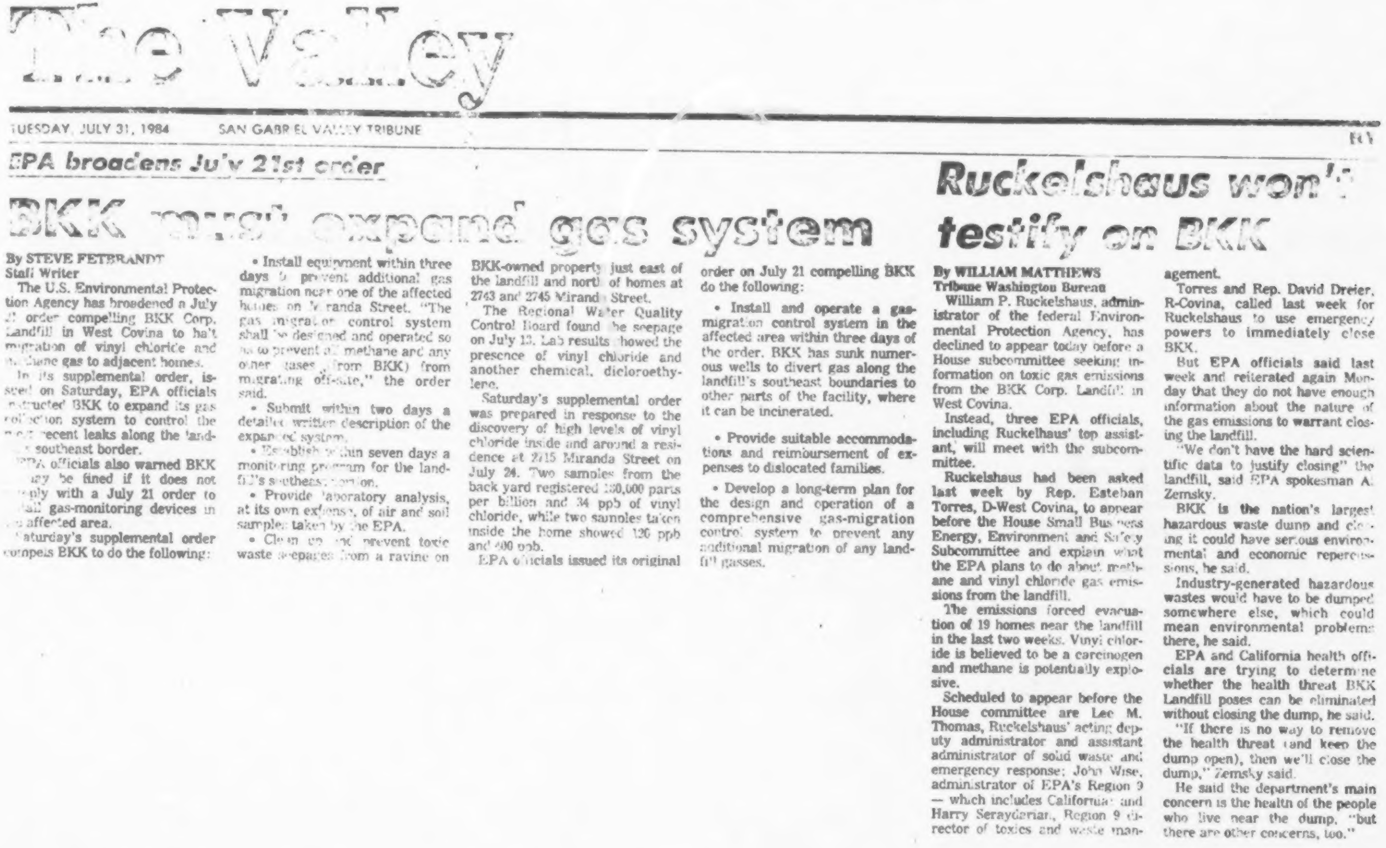
We appreciate the time that you and your staff spent with us and hope that you will take action as quickly as possible on the above requests.

Very truly yours,

Colin Lennard
COLIN LENNARD
Of BURKE, WILLIAMS & SORENSEN
City Attorney of West Covina

CL:eh
cc: Mayor Bacon
City Council Members
Leonard Eliot, Acting City Manager
Mike Miller, Public Services Director

APPENDIX D.—NEWSPAPER ARTICLES



The Valley

TUESDAY, JULY 31, 1984 SAN GABRIEL VALLEY TRIBUNE

EPA broadens July 21st order

BKK must expand gas system

By STEVE FETBRANDT
Staff Writer

The U.S. Environmental Protection Agency has broadened a July 21 order compelling BKK Corp. Landfill in West Covina to halt migration of vinyl chloride and methane gas to adjacent homes.

In its supplemental order, issued on Saturday, EPA officials instructed BKK to expand its gas collection system to control the most recent leaks along the landfill's southeast border.

EPA officials also warned BKK it may be fined if it does not comply with a July 21 order to install gas-monitoring devices in the affected area.

Saturday's supplemental order compels BKK to do the following:

- Install equipment within three days to prevent additional gas migration near one of the affected homes on Miranda Street. "The gas migration control system shall be designed and operated so as to prevent all methane and any other gases (from BKK) from migrating off-site," the order said.
- Submit within two days a detailed written description of the expanded system.
- Establish within seven days a monitoring program for the landfill's southeast portion.
- Provide laboratory analysis, at its own expense, of air and soil samples taken by the EPA.
- Clean up and prevent toxic waste seepages from a ravine on BKK-owned property just east of the landfill and north of homes at 2743 and 2745 Miranda Street.

The Regional Water Quality Control Board found the seepage on July 13. Lab results showed the presence of vinyl chloride and another chemical, dicloroethylene.

Saturday's supplemental order was prepared in response to the discovery of high levels of vinyl chloride inside and around a residence at 2715 Miranda Street on July 24. Two samples from the back yard registered 130,000 parts per billion and 34 ppb of vinyl chloride, while two samples taken inside the home showed 120 ppb and 400 ppb.

EPA officials issued its original order on July 21 compelling BKK do the following:

- Install and operate a gas-migration control system in the affected area within three days of the order. BKK has sunk numerous wells to divert gas along the landfill's southeast boundaries to other parts of the facility, where it can be incinerated.
- Provide suitable accommodations and reimbursement of expenses to dislocated families.
- Develop a long-term plan for the design and operation of a comprehensive gas-migration control system to prevent any additional migration of any landfill gasses.

Ruckelshaus won't testify on BKK

By WILLIAM MATTHEWS
Tribune Washington Bureau

William P. Ruckelshaus, administrator of the federal Environmental Protection Agency, has declined to appear today before a House subcommittee seeking information on toxic gas emissions from the BKK Corp. Landfill in West Covina.

Instead, three EPA officials, including Ruckelhaus' top assistant, will meet with the subcommittee.

Ruckelshaus had been asked last week by Rep. Esteban Torres, D-West Covina, to appear before the House Small Business Energy, Environment and Safety Subcommittee and explain what the EPA plans to do about methane and vinyl chloride gas emissions from the landfill.

The emissions forced evacuation of 19 homes near the landfill in the last two weeks. Vinyl chloride is believed to be a carcinogen and methane is potentially explosive.

Scheduled to appear before the House committee are Lee M. Thomas, Ruckelshaus' acting deputy administrator and assistant administrator of solid waste and emergency response; John Wise, administrator of EPA's Region 9 — which includes California — and Harry Seraydarian, Region 9 director of toxics and waste management.

Torres and Rep. David Dreier, R-Covina, called last week for Ruckelshaus to use emergency powers to immediately close BKK.

But EPA officials said last week and reiterated again Monday that they do not have enough information about the nature of the gas emissions to warrant closing the landfill.

"We don't have the hard scientific data to justify closing" the landfill, said EPA spokesman Al Zemsky.

BKK is the nation's largest hazardous waste dump and closing it could have serious environmental and economic repercussions, he said.

Industry-generated hazardous wastes would have to be dumped somewhere else, which could mean environmental problems there, he said.

EPA and California health officials are trying to determine whether the health threat BKK Landfill poses can be eliminated without closing the dump, he said.

"If there is no way to remove the health threat (and keep the dump open), then we'll close the dump," Zemsky said.

He said the department's main concern is the health of the people who live near the dump, "but there are other concerns, too."

The Valley

MONDAY, JULY 30, 1984 SAN GABRIEL VALLEY TRIBUNE

Expansion of landfill generating studied

By LINDA HAUGSTED
Staff Writer

Officials of the county Sanitation Districts are exploring the possibility of expanding the energy-generating capacity of their methane-burning plant by 400 percent.

The districts dedicated the plant, one of the first commercial landfill gas-mining facilities in the country, last February. Methane gas, which is an odorless, natural byproduct of the decomposing trash in the landfill, is mined from underground in perforated pipes and drawn to the plant. The gas is burned to generate steam to turn jet turbines.

Operating the plant provides a method for controlling the migration of the potentially explosive gas, while earning revenue for the districts. Virtually all other local landfills, including BKK Corp. in West Covina, have gas-mining systems. However, many merely burn off the gas in flares to control odor, or they don't have big enough plants to make commercial power sales viable.

The Puente Hills plant currently generates 2.8 megawatts of power per day, enough to power 5,600 homes. This earns about $3,000 per day for the districts through the sale of the power to the Southern California Edison Co. Power is also piped to Rio Hondo College in Whittier.

But officials said that the plant is only utilizing 20 percent of the available gas. A switch in technology from the jet turbines and an enlargement of the plant would allow the districts to use virtually all the gas, according to Charles Carry, the districts chief engineer.

Officials have been making inquiries and have determined that 10 major companies, including General Electric and Westinghouse, have the knowledge to expand the plant and would be

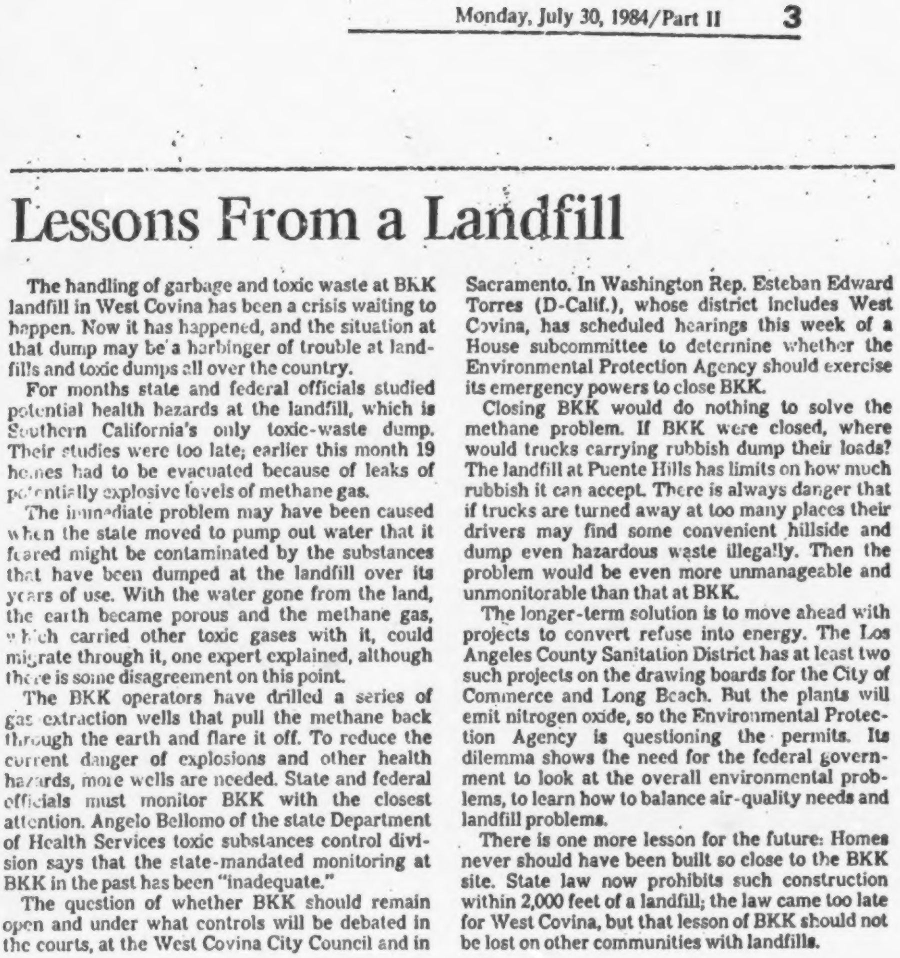
Please see METHANE / B2

From B1

interested in bidding for the project. The expansion, if built today, would cost about $15 million. Ultimately, with financing and inflation costs, the plant could cost up to $[illegible]5 million, Carry said. Districts officials project that the plant would be financed through the developers and a bond issue.

If approved, an expansion would take 16 to 18 months to build. Because of the profitability of the gas sale, the districts could recoup their capital outlay in two years. After paying off the project, Carry said, the districts could earn up to $1 million a month from the sale of power. The landfill could generate payable quantities of gas for up to 15 years.

LOS ANGELES TIMES



Monday, July 30, 1984/Part II 3

Lessons From a Landfill

The handling of garbage and toxic waste at BKK landfill in West Covina has been a crisis waiting to happen. Now it has happened, and the situation at that dump may be a harbinger of trouble at landfills and toxic dumps all over the country.

For months state and federal officials studied potential health hazards at the landfill, which is Southern California's only toxic-waste dump. Their studies were too late; earlier this month 19 homes had to be evacuated because of leaks of potentially explosive levels of methane gas.

The immediate problem may have been caused when the state moved to pump out water that it feared might be contaminated by the substances that have been dumped at the landfill over its years of use. With the water gone from the land, the earth became porous and the methane gas, which carried other toxic gases with it, could migrate through it, one expert explained, although there is some disagreement on this point.

The BKK operators have drilled a series of gas extraction wells that pull the methane back through the earth and flare it off. To reduce the current danger of explosions and other health hazards, more wells are needed. State and federal officials must monitor BKK with the closest attention. Angelo Bellomo of the state Department of Health Services toxic substances control division says that the state-mandated monitoring at BKK in the past has been "inadequate."

The question of whether BKK should remain open and under what controls will be debated in the courts, at the West Covina City Council and in Sacramento. In Washington Rep. Esteban Edward Torres (D-Calif.), whose district includes West Covina, has scheduled hearings this week of a House subcommittee to determine whether the Environmental Protection Agency should exercise its emergency powers to close BKK.

Closing BKK would do nothing to solve the methane problem. If BKK were closed, where would trucks carrying rubbish dump their loads? The landfill at Puente Hills has limits on how much rubbish it can accept. There is always danger that if trucks are turned away at too many places their drivers may find some convenient hillside and dump even hazardous waste illegally. Then the problem would be even more unmanageable and unmonitorable than that at BKK.

The longer-term solution is to move ahead with projects to convert refuse into energy. The Los Angeles County Sanitation District has at least two such projects on the drawing boards for the City of Commerce and Long Beach. But the plants will emit nitrogen oxide, so the Environmental Protection Agency is questioning the permits. Its dilemma shows the need for the federal government to look at the overall environmental problems, to learn how to balance air-quality needs and landfill problems.

There is one more lesson for the future: Homes never should have been built so close to the BKK site. State law now prohibits such construction within 2,000 feet of a landfill; the law came too late for West Covina, but that lesson of BKK should not be lost on other communities with landfills.

The Valley

SUNDAY, JULY 29, 1984 Tribune/News

Council dump action feared invalid

By JOE BLACKSTOCK
Staff Writer

A law clerk for Burke, Williams and Sorenson made an interesting discovery Sunday as he was working on West Covina's suit to close the BKK Corp. Landfill.

The City Council two days before had voted to close BKK's solid waste disposal operation because of methane gas leakage from garbage dumped there.

At that special meeting July 20, council members and officials believed that while the city was banned by state law from interfering with hazardous wastes, it did have jurisdiction over solid wastes at BKK.

The discovery by Lennard's law clerk in Los Angeles proved them wrong but two days too late.

A 1981 amendment to the state codes says local government cannot restrict solid waste landfills that also accept hazardous wastes.

In effect, the council's action was invalid.

"I was shocked," admitted Mayor Bob Bacon, himself an attorney. "I don't know how it got on the books. It must have been placed there as a rider with an unrelated bill.

"I know there never has been a bill on the subject. It must have been added to some other bill without anybody knowing about it."

Senate Bill 501, by state Sen. Daniel Boatwright, D-Concord, specifically excluded local governments in 1981 from interferring with hazardous waste landfills within their boundaries.

And with language identical to SB501, the previously unknown provision in the Government Code stops West Covina from doing what it tried to do last Friday.

"I don't think we would have taken the same action administratively on Friday if we had known then what we know now," explained Bacon.

The only remedy left is the one the city has taken: asking Los Angeles Superior Court Judge Norman Epstein to close the landfill as a nuisance and danger to public health.

On Tuesday, Epstein is expected to rule on West Covina's request for a temporary restraining order closing BKK's hazardous waste operation.

The city and BKK will argue the closure of the solid waste element of the landfill before Epstein on Aug. 10.

Mike Miller, West Covina's community services division manager, noted a state expert Friday said the city could go ahead with closing BKK, if necessary.

Angelo Bellomo, director of

Please see DISCOVERY / B2

DISCOVERY

From B1

hazardous waste operations for the state Department of Health Services locally, said it was within the city's powers to close down BKK's solid waste portion.

"It's obvious even Bellomo didn't know about the state law," said Miller.

"So, to put it one way, we are handcuffed dealing with hazardous waste, and it appears we are handcuffed with solid waste.

"The comment we keep hearing is it is not that bad and it could be worse. The result is they are just flushing West Covina down the toilet."

Both Miller and Bacon noted the city is trying to mobilize the citizenry, especially those who have blamed the council for inaction, to turn their focus toward these agencies responsible for keeping the landfill open.

BKK-Area Evacuees to Be Barred From Homes 1 More Week Pending New Tests

By MIKE WARD, *Times Staff Writer*

Seventy-five West Covina residents who have been forced out of their homes by methane and vinyl chloride gases leaking from the BKK landfill will not be allowed to move back for at least another week, state health officials said Friday.

Further testing is needed to measure gas levels and assess the health risk, the officials told about 300 people who attended a community meeting in West Covina on Friday night.

Many of the residents demanded immediate closure of the dump and some evacuees said they do not want to return because of health fears. They suggested BKK Corp., or the government, buy their houses.

Angelo Bellomo, chief of the Southern California section of the Toxic Substance Control Division of the state Department of Health Services, said the gas leakage can be stopped by drilling collection wells and other measures. Since gas is created by long-term decomposition of waste, closing the dump will not solve that problem, he explained.

But, Bellomo said, regulatory agencies are looking at the dump's overall safety and will make a decision on its future in three months.

Seventeen families on Lynn Court, Nanette Avenue and Leana Drive have been locked out of their homes for 11 days. Two families on Miranda Street, a half-mile away, were advised Wednesday to evacuate after authorities discovered that gas had spread into their neighborhood.

Meanwhile, at the urging of Rep. Esteban Torres (D-La Puente), who represents the area, the House small business subcommittee on energy, safety and environment has asked William Ruckelshaus, administrator of the Environmental Protection Agency, to testify at a hearing on the BKK problem Tuesday in Washington.

Rep. Charles W. Stenholm (D-Texas), subcommittee chairman, said he understands the landfill "presents a serious threat to the health" of West Covina residents and he wants to find out what the EPA is doing about it.

West Covina officials have asked the agency to take jurisdiction over the landfill away from the state, to expand its directives to BKK to clear up the problem, to order the state to hold a hearing to determine if the landfill is endangering health and the environment and to join the city in a lawsuit to put BKK operations under control of a federal judge.

The BKK landfill, which has been in operation for 20 years, handles about one-fifth of the county's household trash and other solid waste and is the principal disposal site for hazardous waste in Southern California.

The Valley

SATURDAY, JULY 28, 1984 SAN GABRIEL VALLEY TRIBUNE

BKK battlers turn to elected officials

By JOE BLACKSTOCK
Staff Writer

West Covina has so far failed to convince the courts, the state Department of Health Services and the Environmental Protection Agency to close down the BKK Corp, Landfill.

Now city officials are turning their efforts toward a different direction: elected officials.

Members of the city Waste Management Advisory Committee, during a special meeting Thursday night, urged an overflow crowd of residents to use letters and telephone calls to influence legislators to do something about the situation.

Fred Landsberg, a member of the committee, noted the actions taken by Congressman Esteban Torres, D-West Covina, in working toward closing down the landfill. He also pointed out few other local legislators have had much interest in the subject.

"We need to write and call all of them — Ruckelshaus (EPA chief William Ruckelshaus), local congressmen, local state representatives — and demand they take action," said Landsberg.

"Put them on record. We want a response from them or we will take action on them in November (at the general election).

"And don't forget Peter Rank," he added. Rank is the head of the state health department, which has taken the largest regulatory role at BKK.

Most of the people who attended the meeting received a list of addresses and phone numbers of elected officials as well as heads of the various regulatory agencies that deal with BKK.

"The people in Sacramento who make policy and who care nothing about the dump — these are the people we have to get to," said Louis Gilbert, chairman of the committee.

Gilbert said the committee will contact every organized group in West Covina, from service clubs to the Chamber of Commerce, and urge their members to join in contacting legislators on the subject.

During the meeting in council chambers Thursday a number of citizens spoke amid thunderous applause.

Tom Whisenhunt, a leader in the Coalition of West Covina Homeowners Associations, called for the community to unify to close the dump.

The community's main opponents are all the regulatory agencies whose representatives sided with BKK in last week's unsuccessful court attempts by West Covina to shut down the dump, Whisenhunt said.

He noted how Angelo Bellomo, local head of the state health department's toxics division, urged Superior Court Judge Norman Epstein not to close BKK.

Please see **LETTERS / B2**

From B1

"Colin Lennard (West Covina City Attorney) had to stand there by himself and did a tremendous job," said Whisenhunt.

"But he got sand-bagged by all the agencies. He was just guillotined."

Whisenhunt also criticized all local legislators except for Torres, who has urged closure.

Lane Noring, a resident of Marlena Street, near the two latest of the 19 evacuated homes, said he is concerned about property values. He wants to sell his house but real estate brokers have told him it's worth only $104,000, only a meager increase in value from the $90,000 purchase price of four years ago.

"A guy down the street sold two years ago and got $135,000 and now that same house is worth a lot less," he said.

Gloria Rodriguez, a long-time critic of BKK, said she wanted to move from the city.

"BKK has obviously put a lot of money in lots of pockets, she said. "I want to move out of West Covina, and I want BKK to pay for it. I want BKK to put some of that money in my pocket like they have all the politicians."

The Valley

SATURDAY, JULY 28, 1984 SAN GABRIEL VALLEY TRIBUNE

Ruckelshaus to testify on BKK

By BILL MATTHEWS
Tribune Washington Bureau

The chief of the Environmental Protection Agency has been asked to tell a House subcommittee next week what the agency plans to do to eliminate the health threat posed by the BKK Corp. Landfill in West Covina.

Rep. Charles W. Stenholm, D-Texas, has asked William P. Ruckelshaus, administrator of the EPA, to testify during a hearing Tuesday morning on the landfill and the threat the toxic wastes buried in it pose to the neighborhood.

It was discovered last week that vinyl chloride gas and methane gas were leaking from the landfill, forcing the evacuation of 19 nearby homes.

Stenholm said Friday that the House Small Business Subcommittee on Energy and Safety wants to know from Ruckelshaus how serious a health threat the landfill represents.

Al Zemsky, a spokesman in EPA's California regional office, said late Friday the agency regards BKK as a severe problem and is working with state and local health officials to determine what should be done.

BKK is the largest hazardous waste landfill in the nation and the economic and environmental impact of closing it down would be "tremendous," said Zemsky. Shutting it down is a possibility, but "we would have to find other methods of disposal," he added.

On Thursday Reps. Esteban Torres, D-West Covina; David Dreier, R-Covina; and Carlos Moorhead, R-Pasadena, joined with 19 other congressmen to ask Ruckelshaus to use emergency powers and halt further dumping of toxic wastes in the landfill.

Torres, whose district includes the landfill, said he expected action from Ruckelshaus as early as Friday morning, but by Friday afternoon no action had been taken.

Stenholm said the House Energy, Environment and Safety Subcommittee will ask Ruckelshaus on Tuesday what action he has taken to eliminate the hazards posed by the landfill.

"I understand officials at EPA believe the problems are being corrected," Stenholm said. But the evacuation of families "indicates to me that the landfill presents a serious threat to the health of West Covina," he said.

Vinyl chloride gas is believed to cause cancer, and methane is potentially explosive. Both gasses were found at levels above those considered acceptable.

Torres, who is a member of the subcommittee, toured the landfill area this week.

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Officials stall BKK solution

By STEVE FETBRANDT
Staff Writer

Residents who live near BKK Corp. Landfill in West Covina were told Friday it will be at least another week before state health officials can assess the health risk from vinyl chloride and methane gas leaks in the area.

City officials and some 200 residents packed the recreation building at Shadow Oak Park to hear representatives from several government agencies report on what is being done to solve the problem.

Mayor Bob Bacon said the city has attempted through all legal means to close the landfill to both hazardous and solid wastes. "But the pressures to keep BKK open have been very great," he noted.

Bacon asked the other government agencies to reverse their opposition to closing the dump and help the city in its effort to obtain a court order. He particularly criticized the state Department of Health Services for failing to take appropriate action in the face of a clear danger to the community.

Angelo Bellomo, spokesman for the state health department, said his agency does not have enough information to show how BKK's closure would eliminate gas leaks near the landfill's southern boundary.

Bellomo said initial test results indicate there is no immediate risk to health from the vinyl chloride concentrations. At the same time, he said the state is not prepared to tell the 19 evacuated families they should return home.

The health department, along with the U.S. Environmental Protection Agency and the South Coast Air Quality Management District, will continue monitoring gas levels in the area through the next week. Bellomo said enough test results should be known by Friday to allow state officials to say whether it is advisable to reoccupy the homes.

Residents, however, said they are tired of rhetoric and that the time has come to close the landfill. Many blamed the landfill for causing illnesses in their families.

Others said they do not want to return home, even after receiving assurances of no health threat.

West Covina has so far failed to convince the courts, the state Department of Health Services

Please see BKK / A2

BKK

From A1

and the Environmental Protection Agency to close the landfill. Bellomo urged Superior Court Judge Norman Epstein not to close BKK, despite the evacuation of two homes on Miranda Street and 17 on Lynn Court and Nanette Avenue.

Vinyl chloride gas is believed to cause cancer and methane is potentially explosive. Both gases were found at levels above those considered acceptable. West Covina evacuated homes for fear of a methane gas explosion.

Michael Miller, West Covina director of Environmental Services, said state and federal officials apparently have eliminated the possibility of an explosion. The major concern now, he noted, is toxicity of the gases and the health effect on residents.

SAN GABRIEL VALLEY TRIBUNE
FRONT PAGE
FRIDAY-JULY 27, 1984

EPA asked to halt BKK dumping

By BILL MATTHEWS
Tribune Washington Bureau

Three San Gabriel Valley congressmen and 19 colleagues Thursday asked the Environmental Protection Agency to use its emergency powers to immediately halt dumping of hazardous waste in the BKK Corp. Landfill in West Covina.

Specialists from the county Department of Health Services will be at the Shadow Oak Park recreation building in West Covina tonight at 6 p.m. to explain the results of tests being conducted at the BKK Landfill following the discovery of methane in 17 homes and vinyl chloride in two homes, all of which have been evacuated.

A letter drafted by Congressman Esteban Torres, D-West Covina, and circulated through the California delegation calls for EPA chief William P. Ruckelshaus to use emergency powers granted him by the Solid Waste Disposal Act to stop the dumping.

At the same time, four West Covina officials met with an EPA regional administrator in San Francisco with a similar request.

Cancer-causing vinyl chloride and potentially explosive methane gases, first discovered July 17, have forced the evacuation of 19 families in two areas on the southern edge of BKK.

The methane is the result of decomposing trash and solid waste, while the vinyl chloride is a residue from hazardous waste dumping there.

"Hazardous materials in the landfill present a serious threat to the people of West Covina and the environment of Southern California," Torres' letter to Ruckelshaus says.

Please see BKK / A2

Torres said he expects a reply from Ruckelshaus possibly by this morning.

Among the other congressmen signing the letter were Valley representatives David Dreier, R-Covina, and Carlos Moorhead, R-Pasadena.

The four-man congregation of city officials in San Francisco urged the EPA to close the landfill and take the lead in solving the problem at BKK, rather than continuing the mixture of responsibility among numerous county, state and federal agencies there now.

Additionally, the city asked the EPA to join it in federal court to seek an injunction against BKK, support the city in its request for a health hearing and add to its BKK mitigation order the Miranda Street area where two families were evacuated Thursday.

Judith Ayres, regional administrator of the EPA, had no comment on the city request, saying the agency would provide a written response soon.

EPA spokesman Al Zemsky said the EPA is still talking to residents in the area and trying to determine if health problems can be eliminated.

"If there is closure at all, it will probably come from the state," he said, referring to the state Department of Health Services.

In a press conference with Dreier Thursday afternoon in Washington, Torres said the 22 signatures on his letter should be a signal to Ruckelshaus the California delegation is united in its desire to have the dump closed to more hazardous waste.

It should also send a signal to Gov. George Deukmejian to find alternative sites for hazardous waste disposal, Torres said.

Torres said he wrote to Deukmejian a month ago requesting the landfill be closed to toxic waste dumping, and that emergency funds be allocated for finding alternative dump sites. Deukmejian has yet to respond to the letter, he said.

Dreier said he called for an end to hazardous waste dumping at BKK four years ago. Since then the situation has gotten worse, he said.

"When I called for closure of the landfill, I was criticized a lot by local elected officials. I was pleased the West Covina City Council now has called for closure of the dump for hazardous waste disposal," Dreier said.

Dreier said halting dumping of toxics probably won't solve EKK Landfill's problems, but it is a first step.

LOS ANGELES TIMES - NEWS IN BRIEF SECTION - FRIDAY - JULY 27, 1984

The Region

3 Will Stand Trial in Dunphy Shooting

Three men charged with shooting television news anchorman Jerry Dunphy and a companion were ordered to stand trial after an accused murderer testified he tipped police when a $25,000 reward was offered. Leonard Fleetwood Jones, awaiting trial for the killing of an alleged cocaine dealer, testified he called police three days after the Oct. 24 shooting of Dunphy, 63, and makeup artist Sandra Marshall, 36. Jones said he named Frederick Cole, 23, as one of the gunmen. However, he testified he could not identify the other two accused men, Greg Chapman, 18, and Joseph Mark Lee, 21. Under questioning by Deputy Dist. Atty. Dennis Choate, Jones also revealed that Cole had been the principal witness against him in his preliminary hearing on the murder charge he faces. Jones was called to corroborate testimony of Raymond Dee Johnson, 22, who was granted immunity from prosecution in the Dunphy case.

With the sun casting intense light on an eight-foot Canadian maple, Andy Lipkis and the TreePeople celebrated the fulfillment of a 3-year-old dream by planting the one-millionth tree in their Urban Forest campaign. The Westwood Park ceremony featured an an off-key rendition of the song "Trees" by Los Angeles City Councilman Marvin Braude and an appearance by actor Lorne Greene. Also on hand was Canadian Consul General Jim Nutt, who donated what organizers said was the one-millionth tree in honor of the Canadian Olympic effort. Lipkis, director of the nonprofit TreePeople organization, initiated the planting campaign in 1981 at the request of city planners seeking a way to help filter out smog in the Los Angeles Basin.

A total of 22 House members, led by Rep. Esteban E. Torres (D-La Puente), asked the Environmental Protection Agency to stop all hazardous-waste dumping at the BKK landfill in West Covina, where recent gas leaks have forced the evacuation of 60 residents. Torres' district includes the controversial landfill, one of the sites used to store toxic wastes carted from other dumps under the federal "superfund" program. State Department of Health Services officials have detected leaks of methane and a cancer-causing gas, vinyl chloride, in concentrations as high as 990 parts per billion, nearly 100 times the state exposure standard. About 100 acres of the 140-acre site already are closed. In a letter to EPA Administrator William M. Ruckelshaus, House members contend that the gas leaks "clearly present a serious threat" and that the dump should be fully closed.

Comedian Eddie Murphy was sued for more than $1 million by an employee of a West Hollywood nightclub who said the movie and television star threw a glass at him, gashing his arm, during an argument July 14. In an action filed in Los Angeles Superior Court, Philip M. Shumway, assistant manager of Carlos and Charley's nightclub on Sunset Boulevard, asked $25,000 general and $1 million punitive damages for his injuries. Shumway had also asked the district attorney's office to charge Murphy with battery, but no charge was issued.

A Chatsworth mirror-making firm has been fined $50,000, and the owner of a Pacoima plating business was sent to jail for 30 days after pleading no contest in separate Municipal Court cases to multiple violations of state and city hazardous waste laws. Monarch Mirror Door Inc. and Larry Flynn of Flynn's Plating were cited after raids last spring by the city's hazardous waste strike force.

Uncertainty Breeds Concern at Landfill

By MIKE WARD, *Times Staff Writer*

WEST COVINA—These are days of frustration, uncertainty and bitterness for homeowners and city officials, two often-warring groups that have found a certain solidarity in the wake of the methane gas leakage that forced the July 17 evacuation of 19 homes near the BKK landfill here.

City officials and residents agree that the dump should be shut down until state and federal officials complete an assessment of health risks. And they agree that the biggest concern is not what is known, but what remains unknown:

- When will evacuees be allowed to return to their homes?
- Will the migrating gas spread?
- What health risks exist?
- Will homeowners be compensated for their inconvenience and possible loss of property values?

Perhaps the biggest frustration that both the city and the residents share today, however, is a sense that the fate of BKK is out of their hands.

A Superior Court judge this week rejected the city's plea to temporarily close the landfill. And although the city will return to court Tuesday to renew its request, state and federal officials have refused thus far to support the move.

Tom Whisenhunt, a long-time landfill opponent and City Hall critic who lives near the dump, said the need to keep BKK open is so strong among state and federal officials that homeowners should ask the federal government to buy their homes as part of its toxic cleanup program.

"Even if you had dead people on the sidewalk, nothing would be done," Whisenhunt said. "They've got to have some place to dump the trash."

Michael Miller, who heads West Covina's Community Services Division, said closure would be more likely if the BKK landfill did not handle one-fifth of the trash collected in the county and was not the principal toxic waste disposal site for all of Southern California.

Tales of Nightmares

At an overflow City Council meeting this week, the concern about the landfill went beyond the recent evacuation. Others who live near the landfill said they also feel threatened by the dump's presence. One mother said her children have experienced nightmares over the health scare.

Mayor Robert L. Bacon said homeowners will have to prove that their homes are uninhabitable in order to persuade the federal government to buy them. He said he does not know whether the situation will go that far, but a number of homeowners said they

Please see UNKNOWN, Page 15

UNKNOWN: Biggest Concern at BKK Landfill

Continued from Page 1

do not see how they can ever feel secure in their homes again and moving is the only alternative as long as the dump remains open.

Geraldine Gilman, who lived next to the dump for 11 years, said she and her husband simply abandoned their condominium near the dump last month—before the evacuation was ordered. The Gilmans said they rented an apartment in Brea and did not bother to try to rent or sell their condominium, concluding that nobody would want to live near the dump.

Other residents said real estate speculators have contacted them in recent days and have offered $40,000 to $50,000 in cash for homes that should be worth $100,000 or more.

Disclosures Listed

Leaders of homeowner groups adjacent to the landfill have been pressing for its closure since 1980, often accusing city officials of being less than supportive in their efforts. When the push to close the dump began, however, state health officials said flatly that the landfill was safe. Since then there have been these disclosures:

- A finding in 1981 that vinyl chloride was being emitted from the dump at levels exceeding the state air quality standard. The state immediately banned disposal of vinyl chloride.
- The discovery in 1982 that other suspected carcinogens were being emitted into the air along with vinyl chloride. A state study in 1983 concluded that 7,700 residents within a mile of the landfill had been exposed to air emissions sufficient to produce five cases of cancer per 100,000 population, officials said.
- Announcement by the Environmental Protection Agency in 1983 that BKK's methods of preventing toxic waste from seeping into the underground water supply were inadequate. Authorities reduced the toxic waste disposal area by 70% and ordered BKK to mix toxic liquids with soil to solidify them before burial.

Les Cook, president of the Hearthstone Homeowners Assn., said regulatory agencies have been saying for years that the dump's problems can be solved, in part by installing more wells to collect and destroy landfill gas.

"Every time we have a problem, they say the answer is drill more wells," Cook said. "(But) the smells and toxics are still there and just as bad as they were seven years ago."

Angelo Bellomo, chief of the Southern California section of the toxic substances control division of the state Department of Health Services, said he is convinced that officials are taking every reasonable precaution to protect the public health and safety. Bellomo said officials of several agencies will meet today to discuss when evacuated residents can return to their homes.

Loss of Credibility

Bellomo concedes that state and federal officials have lost credibility because they were unaware of the methane leak until it was discovered by Southern California Gas Co. crews making a routine check of their own gas lines.

Some homeowners who have been evacuated because of the gas leak say they are so distrustful of the regulatory agencies that they are not sure they want to return to their homes even when officials say it is safe.

Authorities are continuing studies to compute the health risk related to the gas leakage. They also are attempting to determine when the evacuated can return to their homes and working with BKK Corp. on protective measures.

The state Department of Health Services has primary jurisdiction over the landfill, but a dozen other agencies share responsibility. One official said having that many agencies involved widens the resources available, but that because of uncertainties about jurisdiction, some problems "fall through the cracks." The official did not elaborate.

Alex Kelter, epidemiologist with the state Department of Health Services, said he has not seen anything to suggest an immediate health danger to those living adjacent to the dump.

Cancer Risk Higher

"I wouldn't predict any serious long-standing illness, such as to liver function," he said. But the presence of vinyl chloride in gas that has escaped from the landfill does slightly increase the risk of cancer, he said.

Kelter said it is difficult to determine whether the common com-

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UNKNOWN

Continued from Page 15

plaint from residents about headaches is related to the landfill. Headaches can be a response to an exposure to gases and also can arise from stress or both, he said.

Although methane gas is a common problem with landfills, BKK did not have an adequate monitoring system in place when the evacuations took place, state officials said. The landfill was awaiting approval from regulatory agencies for permission to install gas collection wells in the area.

BKK Corp. is expected to bear much of the cleanup costs resulting from the methane gas leakage, including motel bills for displaced persons and the cost of drilling gas collection wells on an urgency basis. BKK Corp. has offered to advance the evacuated families $350 each and the city is paying for their meals and lodging, with the intention of billing BKK.

SAN GABRIEL VALLEY

Thursday, July 26, 1984

Gas Leaks to New Area; 2 Families Flee

By MIKE WARD, *Times Staff Writer*

WEST COVINA—Two families who live next to the BKK landfill voluntarily moved out of their homes Wednesday after methane gas was discovered in their yards, several blocks away from the location were 17 families were evacuated last week.

State health officials said combustible gas was discovered in three backyards and in one home on Miranda Street. Two of the families elected to move, although the gas levels were not high enough to require a state-ordered evacuation.

Regulatory agencies investigating the leakage of gas out of the landfill plan to confer today to decide when the 68 residents evacuated in the Lynn Court-Nanette Avenue area July 17 will be allowed to return to their homes.

Angelo Bellomo, head of the Southern California section of the toxic substances control division of the State Department of Health Services, said that state and federal officials will not discuss a timetable for the return of residents until after the meeting.

However, Bellomo said all the agencies involved believe that the problem of migrating gas can be corrected. BKK Corp. has installed 19 wells to collect and burn gas leaking out of the landfill into the evacuated area and is installing seven more wells to stop leakage into the Miranda Street neighborhood, which adjoins the dump.

The problem on Miranda Street was discovered as part of a survey of 200 homes in the area.

Probes Being Installed

Monitoring probes are being placed around BKK and in neighboring yards to detect combustible gas. Bellomo said evacuated families will be permitted to return only when the monitoring program is working and safety can be assured. He said it is uncertain how long it will take to install monitoring devices.

Bellomo said up to 25 technicians have been working to determine how far the gas has spread and to devise measures to control it.

More sophisticated equipment is being brought in to give continuous readings of combustible gases in several homes. Bellomo said the investigation has been complicated by fluctuations in readings from hour to hour and by the fact that gas has seeped into some yards and homes but not others.

"I know people are feeling frustrations; they think we ought to say whether homes can be occupied or not," Bellomo said. But he said the problem is more complex than it appears.

One home can have high readings of combustible gas while the home next door shows nothing, he said. Geology and soil differences help determine where the gas goes as it moves underground from the landfill to backyards, and in some cases, into homes.

Created by Waste

The gas contains methane created by the decomposition of waste at the landfill and sometimes includes other elements, such as vinyl chloride, a known cause of cancer. Samples are being analyzed to identify all the elements.

Photos on Page 2

Nineteen homes south of the landfill were evacuated July 17, but two families have since returned. Technicians from the state Department of Health Services, federal Environmental Protection Agency, South Coast Air Quality Management District and other agencies are collecting, analyzing and measuring samples drawn from inside homes and from probes in the ground.

None of the regulatory agencies believe that closing the landfill will help because the seepage takes place over a number of years, Bellomo said. The city of West Covina, however, will seek a court order Tuesday to shut the landfill down until the gas migration is stopped.

Kenneth Kazarian, BKK Corp. vice president, said the decomposition process that creates methane can take as long as 13 years, so closing the landfill would have no immediate impact.

BKK Corp. had applied for permits to install the gas collection system before the methane leak was discovered by Southern California Gas Co. crews during a routine inspection of gas lines. The gas company first detected combustible gas July 9, rechecked the

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LOS ANGELES TIMES
SAN GABRIEL VALLEY SECTION
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GAS: 2 More Families Move Out

Continued from Page 1

area and found large amounts of combustible gas on July 17. City and regulatory agencies were notified and began evacuations under orders from the state Department of Health Services.

Bellomo said it is unfortunate that the agencies responsible for the dump did not discover the leak themselves.

"For too long," he said, "there has been no monitoring (for methane gas leaks) or very little at the landfill."

Bellomo said he would close the landfill immediately if closure would protect health and the environment. West Covina officials and homeowners have accused the state of keeping the dump open only because there are no alternative sites to handle waste. BKK is the chief disposal site for hazardous waste in Southern California and also receives 6,000 to 8,000 tons of ordinary refuse every day.

While Bellomo said he would not hesitate to close BKK, Bellomo said he must also weigh the importance of the landfill to Southern California. If closure would not solve the gas migration problem, he said, there is no reason to disrupt the disposal of hazardous waste regionally.

Even before the migrating gas was discovered, the state Department of Health Services and other agencies had begun a detailed examination of the BKK site, prompted by a federal Environmental Protection Agency report last year that criticized BKK's safeguards for keeping toxic waste out of underground water.

In the last six months, Bellomo said, regulators have learned more about the dump than they had discovered in the previous 20 years of its existence. In a few months, he said, the regulatory agencies will have enough information to decide whether BKK can be allowed to remain in operation as a toxic waste landfill. But it is not time yet, he said, to make that decision.

WHITTIER DAILY NEWS - THURSDAY - JULY 26, 1984

FRONT PAGE

BKK gas forces more from homes

By JOE BLACKSTOCK
Staff Writer

Vinyl chloride forced the evacuation Wednesday of two Miranda Street families more than a half-mile east of 17 residences already evacuated near the BKK Corp. Landfill.

Ellen Volmert, of the city manager's office, said West Covina officials ordered the two homes evacuated Wednesday afternoon because of high readings of the cancer-causing gas.

She said the gas was discovered inside one residence at 2715 Miranda and in dangerously high levels underground in a wet area in the back yard.

The second residence, at 2711 Miranda, has been evacuated because of its proximity to the other property, she said.

No large-scale amounts of methane gas have been found in the Miranda area, Volmert said. The 17 houses in that area were evacuated July 17 because of potential for explosion caused by the methane there.

Vinyl chloride, though, has been found inside two of those 17 houses.

The gas discoveries at Miranda Street were made by the state Department of Health Services.

Nestor Acedera, BKK site manager for the state Department of Health Services, originally said the amount of vinyl chloride was not high enough to force the residents to leave.

SAN GABRIEL VALLEY TRIBUNE
THURSDAY-JULY 26, 1984
FRONT PAGE

Two families leave

BKK gas forces more from homes

By JOE BLACKSTOCK
Staff Writer

Vinyl chloride forced the evacuation Wednesday of two Miranda Street families more than a half-mile east of 17 residences already evacuated near the BKK Corp. Landfill.

Emergency meeting of panel set tonight

An emergency meeting of the West Covina Waste Management Committee has been called tonight at 7:30 in room 315 of City Hall to discuss the methane/vinyl chloride gas problem.

Chairman Louis Gilbert said Department of Health Services spokesman Nestor Acedera are expected to give updates on the situation around the BKK Corp. Landfill.

The meeting will be switched to the nearby county library if too large a crowd attends.

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The gas discoveries at Miranda Street were made by the state Department of Health Services on Tuesday.

Nestor Acedera, BKK site manager for the state Department of Health Services, originally said the amount of vinyl chloride was not high enough to force the residents to leave.

"However, we did strongly recommend he (the homeowner at 2715) vacate his house just to be on the safe side," he said.

The homeowner, when contacted by The Tribune Wednesday afternoon, declined to give his name and said he did not plan to leave his house.

He said the health department explained the situation Tuesday night, and he didn't feel it dangerous to remain.

"We did tell him the risk assessment by our staff determined that for the short term the level of exposure was tolerable," Acedera said.

It was the city's decision to order the evacuation, according to Volmert.

Acedera said his staff checked the house's interior after they discovered foul landfill smells coming from water seeping from a sprinkler in the back yard.

The homes are below a slope on top of which drill rigs were sinking some of the nearly two dozen new wells designed to siphon off gases in the landfill.

Acedera also said analysis of samples taken over the last few days near the 17 other evacuated homes on Lynn Court, Nanette Avenue and Leanna Drive showed the leakage of methane gas appears to be decreasing.

Meanwhile, Congressman Esteban Torres, D-West Covina, said Wednesday he has asked William Ruckelshaus, administrator of the Environmental Protection Agency, to shut down BKK.

Torres said he will meet today with Lee Thomas, in charge of emergency response for the EPA in Washington, D.C., and tell him the agency has the authority to close BKK down and should.

On a similar mission, West Covina Mayor Bob Bacon, City Attorney Colin Lennard, Assistant City Manager Leonard Eliot and Community Services Division Manager Mike Miller will travel to San Francisco today for a 10 a.m. meeting with Judith Ayres, EPA regional administrator.

Assemblywoman Sally Tanner, D-El Monte, said Wednesday she had no immediate plans to interfere with the actions of the state health department, which is assigned by the EPA to regulate hazardous waste landfills in the state.

In light of the West Covina City Council's unsuccessful attempt to close a portion of BKK's operation Monday, Tanner said she doesn't believe it is time for politicians to get involved.

"Now is when the scientific people should make the decision. It's really a scientific judgment, not a political one, at this point," Tanner said.

Tanner, who is chairwoman of the Assembly Committee on Consumer Protection and Toxic Materials, said state health department officials told her they are looking into the issue of closing down BKK, but would not make a decision on it for several months.

Joel Moskewitz, the governor's chief aide on hazardous waste issues, said protecting the public health is the state's aim in its operations at BKK.

Photo / Tom Hinkle

Drilling for gas

Drilling rigs work overtime behind Miranda Street houses Wednesday to sink wells into the perimeter of the BKK Corp. Landfill in an attempt to reduce the migration of methane and vinyl chloride gases into homes on the south side of the facility. Two homes on Miranda Street were evacuated Wednesday afternoon because of vinyl chloride, bringing to 19 the number of West Covina families out of their homes since July 17.

HIGHLANDER - WEST COVINA
FRONT PAGE
WEDNESDAY-JULY 25, 1984

RESIDENTS EVACUATED

BKK solution sought

Council closes, court opens

By Carol Smithberg

The BKK Landfill was open for business as usual Monday morning despite the closure to non-hazardous waste called for over the weekend by the West Covina City Council.

Meeting in special session, the council took the closure action due to the problem of the methane gas and vinyl chloride migration from the BKK Landfill to 19 nearby residences.

On Monday a.m., BKK obtained a restraining order from the Superior Court upsetting the city council decision. At press time, further hearings are to be held as whether the landfill will remain open.

Nearly 20 agencies are working to solve the problem of leakage from the hazardous waste landfill that caused the evacuation of 19 families last week.

Agencies have been seeking a solution since July 17, when a Southern California Gas Company inspection discovered a high reading of methane gas around and in homes south of the landfill.

Further testing has revealed a concentration of vinyl chloride also present at the home sites located on Lynn Court, Nanette Avenue, and Leanna Drive.

When the West Covina BKK Landfill Hazardous Waste Disposal Transition Task Force met, it was reported that only two families had been permitted back into their homes. The remainder were housed at nearby motels or at the home of friends and relatives.

BKK IS THE SOURCE

"There is no question that the BKK Landfill is the source of the gases migrating to the homes," stated Angelo Bellomo of the California Department of Health Services. Speaking at the task force meeting, Bellomo said, "If the City of West Covina feels there is a health problem, they can deal with it!"

Bellomo said landfill operators should not be allowed to let material migrate from their site. It is in violation of the law. He reiterated the state position that if there is a risk they'll close the facility, then went on to say they also can not cause the hazardous waste business to be turned upside down.

HEALTH RISK FACTOR

After disclosure that vinyl cholride, a known carcinogen, is also present at the home sites, state epidemiologist Dr. Alex Kelter, addressed the health risk factor. He said that there is an increased risk, and that they are not comfortable bringing people back to their homes until they are sure of their safety.

The State Department of Health Services and the Federal Environmental Protection Agency, working jointly with the City of West Covina, the Los Angeles County Health Department and the South Coast Air Quality Management District are developing a plan of action to monitor the gas leaks in the affected residential area.

MONITORING DEVICES

Following the completion of the testing and the determination of the source of the gases, an order is expected to direct the operators of the BKK landfill site to install perimeter monitoring devices; and to expand their present gas collection well systems.

Immediate, and long term

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HIGHLANDER-WEST COVINA
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BKK - PAGE TWO

BKK leakage

from page 1

corrective measures are proposed at BKK with 14 wells drilled as Phase I of the gas collection project.

Ed Camarena of the South Coast Air Quality Management District said, "There is no guarantee the gas collection will work. If it isn't successful we will have to think of another plan."

CALLS ON EPA

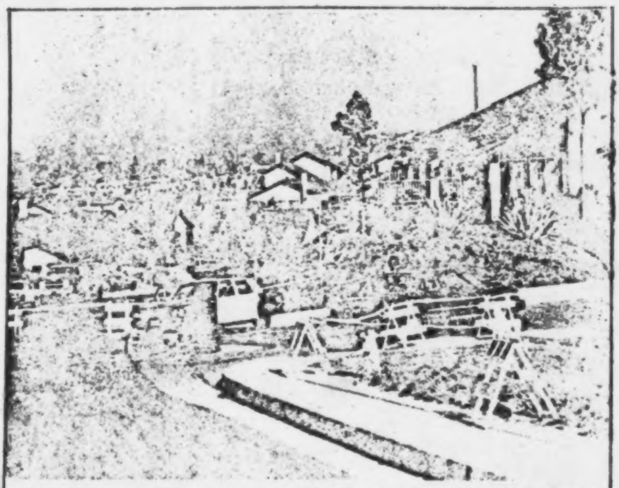
Congressman Esteban E. Torres (D-West Covina) has talked to Environmental Protection Agency Regional Administrator Judity Ayres, and called for the immediate closure of the BKK Landfill to hazardous waste dumping.

Torres said, "I have requested that the EPA immediately prohibit BKK from accepting hazardous waste materials. The residents of West Covina living near the site have been exposed to enough danger. I can only hope that no one will be harmed as a result of this disgraceful situation."

OTHERS REQUEST CLOSURE

A number of the people attending the task force meeting said close BKK. Nancy Adan, newly elected member of the BKK Transition/Waste Management Commission, summed it up with, "closing the dump would be best for the people of West Covina. If something is bad, why keep adding to it?"

At this time, officials state that BKK is cooperating to solve the problem and every effort is being made to get the residents back to their homes safely.



DESERTED NOW—Pictured is a portion of the West Covina area where 19 families had to be evacuated due to methane gas and vinyl chloride migration from the neighboring BKK Landfill. Additional photo on page 3 Photo by Carol Smithberg

HIGHLANDER-WEST COVINA
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BKK - PAGE THREE

CRIME SCENE DO NOT CROSS

TELLS THE STORY—Les Cook, president of the Hearthstone Homeowners Association in West Covina, looks over the site where 19 homes had to be evacuated due to the hazardous waste BKK Landfill. (Pictured in the background). The yellow tape bearing the words "crime scene do not cross" is bordering an area north of Amar including Lynn Court, Nanette Avenue, and Leanna Drive.

Photo by Carol Smithberg

SAN GABRIEL VALLEY TRIBUNE
FRONT PAGE
WEDNESDAY-JULY 25, 1984

Teamsters head fears BKK hazards

By JOE BLACKSTOCK
and LINDA HAUGSTED
Staff Writers

A union leader said Tuesday he is worried about the potential health hazard for trash and hazardous waste truck drivers who use the BKK Corp. Landfill in West Covina.

Carl Lindeman, president of Teamsters union local 396 in Los Angeles, said he plans to seek expert help to determine if the drivers are in any sort of jeopardy while they are at the landfill.

"We understand the precautions taken at these dumps," Lindeman said, "and they are not worth a damn. We are just now looking at the situation and will consult experts who better understand the potential hazard at BKK.

"If they tell us there is a hazard we will immediately inform our members and start negotiations with those companies whose trucks they drive."

The comments came Tuesday on the seventh day the 17 families living on the southern boundary of BKK have been out of their homes. They were evacuated July 17 when potentially explosive levels of methane gas were found throughout their neighborhood.

The earliest the estimated 60 people can return to their homes would be Friday, according to city spokesman Ross Heaton.

Lindeman said Tuesday he felt compelled to initiate his own examination of the situation at BKK because of last week's events.

"We really don't know what kinds of fumes or residues are getting onto the clothing of our members," explained Lindeman,

Please see BKK / A2

BKK

From A1

who said his union represented 90 percent of the drivers transporting waste to BKK. "Then they take that clothing home and may contaminate their families," he added.

However, a spokesman for owners of waste trucks said he disagreed there was any problem for drivers at the landfill.

Hy Weitzman, representing the California Disposal Association in San Bernardino, said his members have no concerns over the possibly explosive levels of gas found near the site last week.

"It's a dangerous occupation (hauling wastes on a landfill) but no one is concerned over the methane," he said. "We are confident in BKK's gas recovery program."

Weitzman, whose members' trucks carry 1,200 tons daily to BKK, said the nearest hazardous waste landfill to BKK is Casmalia in Santa Barbara County or Kettleman Hills in Kings County, both about 150 miles away.

"I think they should be very, very careful in considering a closure," he said. "BKK bends over backward to meet the rules.

"The whole world is looking at BKK. They're not trying to hide anything under the rug."

At the site of the evacuation — Lynn Court, Nanette Avenue and Leanna Drive — state Department of Health Services experts continue to test the soil and air around the 17 residences every three hours.

Results of these and other tests taken to get an idea of the extent of the gas migration problem are expected on Thursday or Friday.

The results will be given to Superior Court Judge Norman Epstein in the continuation Tuesday morning of a West Covina suit seeking a restraining order to halt the hazardous waste dumping portion of BKK's operation.

On Aug. 10, the city and BKK will again be in Superior Court to argue the merits of a restraining order obtained Monday morning preventing West Covina from stopping solid waste dumping at the landfill.

Los Angeles Times METRO
Wednesday, July 25, 1984

'At first it was kind of an adventure. Now it's just a nightmare. You never think something like this could happen to you.'

—Evacuee Ruth Dennis

'What's the matter with you people? How do you know something's not going to explode and somebody will die?'

—Evacuee Joseph Jaimie

Methane Gas Scare

Dump-Area Evacuation Leaves Homeless Angry

By DEBORAH HASTINGS, *Times Staff Writer*

Tears welled in Glori Hernandes's eyes as she angrily knotted a tissue between her fingers and looked around the crowded foyer of the West Covina City Council chamber.

"How can they possibly suggest that there is no problem, when I'm living in a hotel?" the 24-year-old nurse asked after Monday night's council meeting. "How can they possibly say that there is no problem with the BKK landfill when we can't even go back to our homes"?

It has been little more than a week since West Covina police evacuated 19 homes because dangerous levels of methane gas from the nearby landfill had leaked into the quiet neighborhood.

Hernandez; her husband, Andrew, and members of other evacuated families were at Monday night's packed council session to demand the closure of the controversial dump and to try to make sense of the past eight days that have irreversibly affected their lives.

Of the 19 evacuated families, only two have been allowed to return to their homes. The remaining 17 cannot go back until further testing is completed.

Local, state and federal officials have so far found at least one carcinogenic substance, vinyl chloride, in the potentially explosive methane gas. It will be sometime next week before all the testing is completed, but state health officials said they could decide as early as Thursday when homeowners can go back to the neighborhood.

For many of the 68 people who cannot return home, the past week has been clouded by fear and anger. They fear that their homes may never be safe from toxic seepages at the landfill, and they are angry because they feel there is little they can do to stop it.

Ruth Dennis grabbed only her nightgown and some makeup when the police arrived last Tuesday night to tell her she had five minutes to pack an overnight bag and shut off all her utilities.

Thinking the evacuation was only for one night, Dennis said she and her mother, brother and son took little with them. After wearing the same clothes for four days, they each purchased two new outfits and billed the city.

"At first it was kind of an adventure," Dennis said, with a laugh that turned to a frown. "Now it's just a nightmare. You never think something like this could happen to you.

"I watched them go into my house Saturday with oxygen masks. If they need oxygen masks to go into my house, am I going to be safe without one?" she asked.

Dennis, 40, moved her family into a $150—a—night room at the Sheraton in the City of Industry after spending two days in a cramped West Covina motel room.

"We decided that we were at least going to be comfortable," Dennis said.

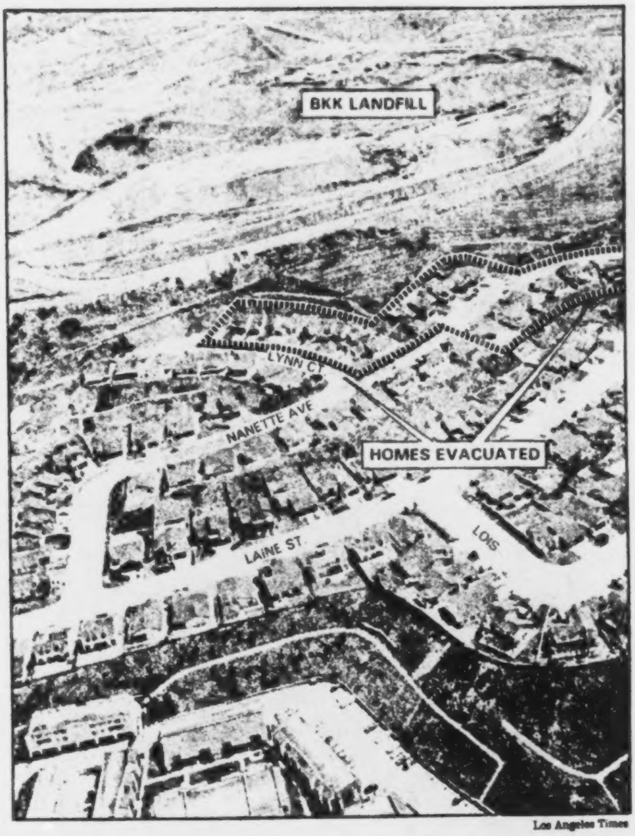
Three other evacuated families have also moved to the Sheraton.

The city is paying for hotel rooms for 10 families. BKK officials are expected to reimburse the city. The other evacuees are staying with relatives or friends.

However, Dennis said, a fancy hotel room is little consolation.

"I'm tired and I want to go home," she said. "But I'm scared to go home. We don't know if we ourselves have been

Please see GAS, Page 3



Los Angeles Times

GAS: Homeless Are Angry, Scared

Continued from Page 1

contaminated. Does it seep into the building? Is it in our clothes, our furniture, the carpeting"?

Voicing a concern raised by many homeowners at Monday's council meeting, Dennis asked: "If it's so dangerous, why are they still letting them dump stuff up there?"

Last week the City Council ordered the landfill closed to solid waste, but its decision was overruled Monday by a Los Angeles Superior Court judge who refused to block the delivery of solid and toxic wastes to the dump.

Judge Norman L. Epstein said he had no evidence that closing the landfill would stop the gas leakage.

That decision prompted angry responses from residents at the council meeting.

"What's the matter with you people?" evacuee Joseph Jaime angrily asked the council members. "How do you know something's not going to explode and somebody will die"?

Mayor Robert Bacon told the overflow audience that because of the city's quick action in evacuating residents, any exposure to toxic substances was minimal.

AL MARKADO / Los Angeles Times

Masked inspector prepares to enter a West Covina home.

"The levels of exposure are so slight because of the time period involved," Bacon said. "There should not have been any substantial danger to anyone's health."

The mayor added that his statement was based on findings by a toxicologist with the state Department of Health.

Efforts to reach BKK Corp. on Tuesday were unsuccessful.

Before Monday's council session, Jaime shook his head and said he may never return to the home he bought six years ago.

"I've been really depressed this week," the 31—year—old naval shipyard worker said. "I don't know what to do. I don't want to move my family back there. What worries me is that there is methane gas under the house. What if it explodes"?

Jaime said he is contemplating moving his two children and his wife, Chong, into his sister's home in La Puente.

"But who is going to buy my house now?" he asked. "Right now it's probably worth nothing. I paid $78,000 for it."

Many of the affected homeowners say they want BKK Corp. or the government to buy their houses. They say there is little chance of public sale because of their proximity to the dump.

More than 250 nearby residents are involved in five lawsuits that are slowly moving through Pomona civil courts against BKK Corp., builders of the homes and their real estate brokers. Because of court backlogs, the first suit is not expected to go to trial for at least a year and a half.

HIGHLANDER
WEDNESDAY-JULY 25, 1984

BKK leaks to surrounding homes

By Carol Smithberg

Amid cries of close BKK, nearly 20 agencies are working to solve the problem of leakage from the hazardous waste landfill that caused the evacuation of 19 families last week.

Agencies have been seeking a solution since Tuesday, July 17, when a Southern California Gas Company inspection discovered a high reading of methane gas around and in homes south of the landfill.

Further testing has revealed a concentration of vinyl choloride also present at the home sites located on Lynn Court, Nanette Avenue, and Leanna Drive.

As of Thursday night, at the time of a West Covina BKK Landfill Hazardous Waste Disposal Transition Task Force meeting, only two families had been permitted back into their homes. The remainder were housed at nearby motels or at the home of friends or relatives.

The agencies involved plan to continue testing and at this time give no indication as to when the remainder of the residents can return to their homes.

BKK IS THE SOURCE

"There is no question that the BKK Landfill is the source of the gases migrating to the homes," stated Angelo Bellomo of the California Department of Health Services. Speaking at the task force meeting, Bellomo said, "If the City of West Covina feels there is a health problem, they can deal with it!"

Bellomo said landfill operators should not be allowed to let material migrate from their site. It is in violation of the law. He reiterated the state position that if there is a risk they'll close the facility, then went on to say they also can not cause the hazardous waste business to be turned upside down.

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Following the completion of the testing and the determination of the source of the gases, an order is expected to direct the operators of the BKK landfill site to install perimeter monitoring devices; and to expand their present gas collection well systems.

Immediate, and long term corrective measures are proposed at BKK with 14 wells drilled as Phase I of the gas collection project.

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At this time, officials state that BKK is cooperating to solve the problem and every effort is being made to get the residents back to their homes safely.

SAN GABRIEL VALLEY TRIBUNE
TUESDAY-JULY 24, 1984
FRONT PAGE

Restraining order delivered

BKK remains open

By JOE BLACKSTOCK
and GENE GHIOTTO
Staff Writers

The West Covina City Council's attempt to close down the BKK Corp. Landfill lasted only 2½ hours Monday.

At 8:30 a.m. BKK delivered a temporary restraining order to the city forcing West Covina police to remove barricades placed at the landfill entrance at 6 a.m.

The council voted Friday night to suspend BKK's use permit preventing dumping of solid wastes. The action was taken because of methane gas leakage from the landfill into residences in the area.

Additionally, the city temporarily failed in an attempt Monday afternoon to get its own restraining order to close the hazardous waste portion of BKK's operation.

Superior Court Judge Norman L. Epstein continued the hearing to July 31 at 9 a.m. in Department 85 to hear further arguments and look at results of studies now under way at the landfill.

At that time, he will consider West Covina's request for a halt to dumping at BKK until the firm's actions to stop the migration of methane gases into 17 homes in the area are shown to be effective.

See related story on B1

Residents of the 17 homes — on Lynn Court, Nanette Avenue and Leanna Drive, along BKK's southern boundary — were evacuated last Tuesday because of the gas.

No decision on when they can return is likely until at least Wednesday, according to city spokesman Jack Yoshino.

City Attorney Colin Lennard argued before Epstein on Monday there was no way to immediately determine if the line of 19 wells drilled along BKK's southern flank is effective in halting the gas migration.

He said as many as 60 days may be needed to assure such actions will work.

However, Epstein said it appeared BKK was doing everything possible to mitigate the gas problem.

"If BKK wasn't trying to mitigate the problem, I would be the first to order them closed," Epstein told Lennard.

"I would close the site in a minute if I thought it would make a difference."

Ken Kazarian, vice president of the BKK Corp., said after the hearing his firm has done everything necessary to mitigate the problem. The firm's 19 new wells along the southern boundary are in a line 1,500 feet long.

"When all is said and done, I believe the public will be satisfied that BKK is safe," he said.

Additionally, he said the firm is preparing an Environmental Protection Agency-required master plan for long-range monitoring of gas and water leakage at the site.

Yoshino said the agencies monitoring the methane problem in the neighborhood have completed a 125-home survey and found no levels of methane comparable to those found around the 17 evacuated homes.

West Covina Thwarted on Closing BKK Dump

By DEAN MURPHY, *Times Staff Writer*

The City of West Covina was dealt a severe setback Monday in its bid to close the controversial BKK Corp. landfill when a Los Angeles County Superior Court judge refused to block the delivery of solid and toxic wastes to the landfill.

Judge Norman L. Epstein upheld the landfill's right to accept solid and hazardous wastes at least until next week when the results of tests on 17 homes evacuated by authorities last week are expected from the state Department of Health Services.

He said he had no evidence that closing the landfill will stop leakage of methane gas into an adjacent neighborhood.

City officials, who on Friday ordered the landfill closed to solid wastes, called the decision "unsatisfying" and "disappointing."

"We still feel the site should be closed down," said West Covina City Atty. Colin Lennard.

Sixty residents were evacuated from the neighborhood last Tuesday night after Southern California Gas Co. crews, during a routine inspection, detected potentially explosive levels of methane gas in and around their homes.

Local, state and federal investigators have since determined that the gas contains at least one carcinogenic substance, vinyl chloride.

Epstein, in rejecting the city's bid for a temporary restraining order, also ordered city officials to abide by an agreement reached in court with BKK that prohibits the city from blocking trash and waste haulers from entering the landfill pending a hearing on July 31.

At that hearing, Epstein said, he will review the results of state tests and, if necessary, reconsider issuing a restraining order against BKK.

At least 50 trucks carrying solid wastes were turned away from the landfill by West Covina police early Monday morning in accordance with the City Council decision Friday night to close the landfill to those wastes.

BKK receives 6,000 to 8,000 tons of household trash a day and is Southern California's principal disposal site for hazardous waste.

Epstein, in explaining his order, said he was concerned about issues raised in a statement by Angelo Bellomo, chief of the Southern California section of the Toxic Substances Control Division of the state Health Department. Bellomo recommended against any move to close the landfill, citing problems it would create in managing the disposal of hazardous waste in Southern California.

In addition, Bellomo said that his department "is presently unaware of any need to close the facility in order to protect health or the environment from the migrating landfill gas because it does not appear that such action would have any short-term impact on the gas migration problem."

Lennard argued that the temporary restraining order is necessary at least until local, state and federal agencies have determined that BKK's efforts to contain the migrating gas have been successful. Kenneth Kazarian, BKK vice president, said the company has drilled 19 new gas collection wells near the evacuated homes to trap the gas.

"We have done everything humanly possible," Kazarian said.

Lennard, who said it is "abominable" that BKK did not drill the wells long before residents were forced to evacuate their homes, asked the judge to review BKK's past record of responding to problems at the landfill.

"We want to be able to assure the citizens of West Covina that those emissions and any leachate will in fact be stopped," he said.

- L.A. Times TUESDAY July 24, 1984

The Valley

TUESDAY, JULY 24, 1984 SAN GABRIEL VALLEY TRIBUNE

BKK closure impact countywide

By LINDA HAUGSTED
Staff Writer

If the courts close the BKK Corp. Landfill in West Covina, the increased load could cause early daily closures of the area's largest non-hazardous landfill, Puente Hills Landfill near Hacienda Heights.

Approximately 8,000 tons per day of non-hazardous solid waste will have to be diverted to other local sites from the West Covina Class I site if it closes. The San Gabriel Valley houses the Puente Hills and Spadra landfills, both operated by the county Sanitation Districts; and the privately owned Nu-Way Industries Landfill in Irwindale and Azusa Land Reclamation Co. in Azusa.

Charles Carry, chief engineer for the districts, said Monday that diverted waste from the closure of BKK early in the morning contributed to the shutdown of Puente Hills before its normal closing time. (West Covina last week declared BKK to be a nuisance, and police closed the landfill from 6 a.m. to about 8:30 a.m., when BKK officials obtained a court order to reopen the landfill).

According to the terms of an operating permit granted by the county, Puente Hills may accept 72,000 tons per week of refuse. This averages out to about 13,000 tons per day. Once that level is met, the workers close the gates. The districts' Spadra site, in Pomona, has no daily capacity limits, however.

Should Puente Hills have to absorb the waste load from BKK, the early closures could become chronic, Carry said. The increased load could cause higher costs to the district, for overtime and additional equipment at Spadra, and rescheduling expenses at Puente Hills if more workers have to be put on early-hour shifts.

The economic impact of a BKK closure is still being considered by county officials, Carry said, including the possibility of higher dumping fees. Any action would have to be approved by the districts' board of directors, composed of mayors of the local cities.

Managers at Nu-Way and Azusa Reclamation were unavailable Monday for comment on the impact at their facilities.

Carry said the closure of BKK would not increase the risk of hazardous waste being dumped at other Class II sites. Hazardous wastes are transported in easy-to-spot tanker trucks, and the loads are closely inspected, he said.

The chief engineer said he was not sure how much refuse would end up coming to the Valley. If BKK were to close its' transfer station in Wilmington, "it could change the whole ball game."

At the transfer station, small loads of debris from throughout the South Bay are consolidated, compacted and put in a larger truck for the ride to BKK. Without that centralized gathering point for trash, the debris loads could be broken up to more sites in more truckloads. However, Puente Hills would still be the closest destination for those loads, Carry said.

BKK: 21-years of increasing controversy

The 21 year history of BKK Corp. landfill has been a stormy one in West Covina. Here are some of the key dates:

Dec. 10, 1958 — City annexes area that is the site of future landfill.

Jan. 14, 1963 — City Council turns down, by 4-1 vote, Home Savings and Loan plan to build landfill in San Jose Hills.

Feb. 25, 1963 — Council reverses itself, approves landfill by 3-2 vote.

June, 1974 — Talks under way for plan by which BKK would buy property it leases from Home and then sell it to nonprofit city corporation.

Feb. 23, 1976 — City clamps $100,000 minimum annual tax on BKK; council claims firm is dragging feet on sale proposal.

June 15, 1976 — Council revises unclassifed use permit to include the $100,000 tax. Permit specifically deletes plan for the city to purchase the property.

March, 1978 — BKK Corp. purchases land from Home Savings.

Oct. 13, 1980 — 7,532 persons sign petition asking landfill be closed.

April 26, 1981 — Council bans transfer of cleanup wastes from other toxic waste sites.

April 27, 1981 — BKK gets restraining order halting the city ban on cleanup wastes.

June 8, 1981 — Senate Bill 501 passes, banning city control over hazardous waste dumping.

March, 1982 — Recall of Councilmen Chet Shearer, Bob Bacon, Ken Chappell and Herb Tice is defeated as is measure banning toxic waste in city.

September, 1983 — EPA report released showing 18 violations of federal environmental rules.

Dec. 30, 1983 — EPA orders phase-out of liquid waste dumping at BKK due to discovery of migration of contaminated water beyond barriers designed to halt them.

April 20, 1984 — 70 percent of BKK's hazardous waste area is closed due to migration of contaminants on its southeastern side.

May 2, 1984 — Direct dumping of liquids is banned at BKK, but firm begins mixing liquids with soil for disposal.

July 17, 1984 — 19 homes on BKK's southern slope are evacuated because methane gas from the landfill is discovered around them.

July 19, 1984 — Cancer-causing vinyl chloride from the landfill is found in two homes within the evacuated area.

July 20, 1984 — City Council votes to close solid waste portion of landfill if BKK cannot demonstrate it can halt the gas migration.

July 23, 1984 — City police are ordered to close landfill, but restraining order obtained by BKK reopens facility after 2½ hours.

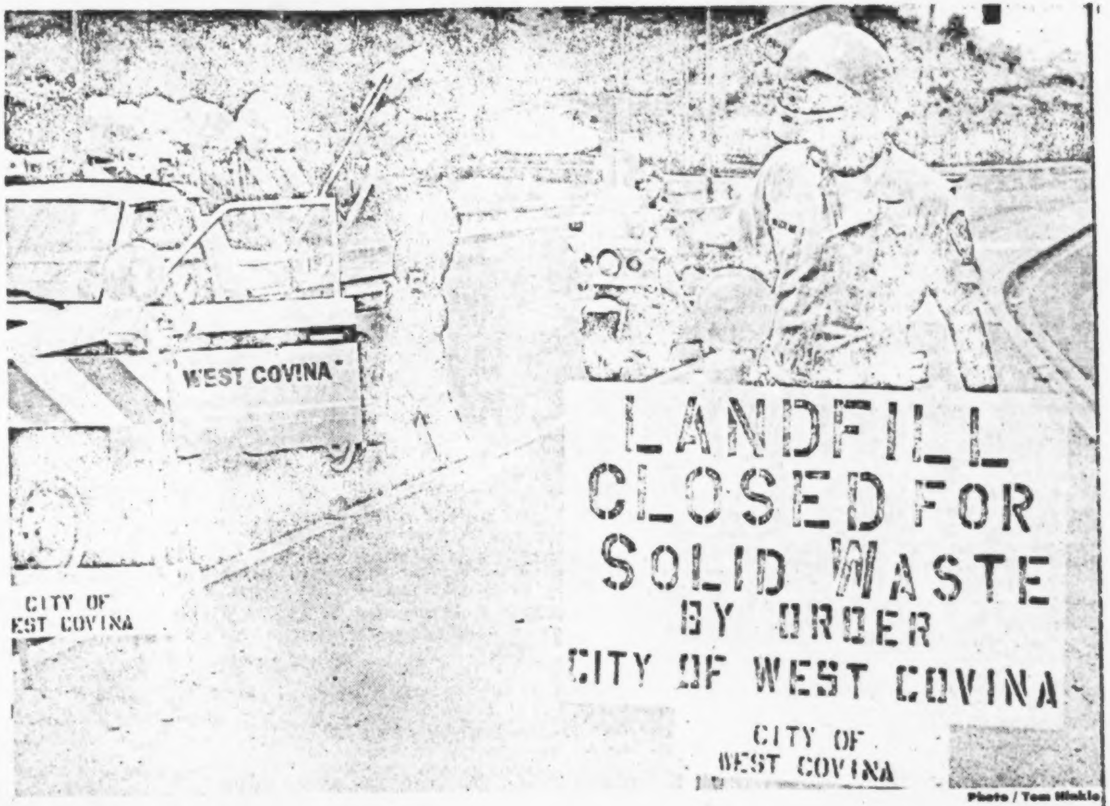
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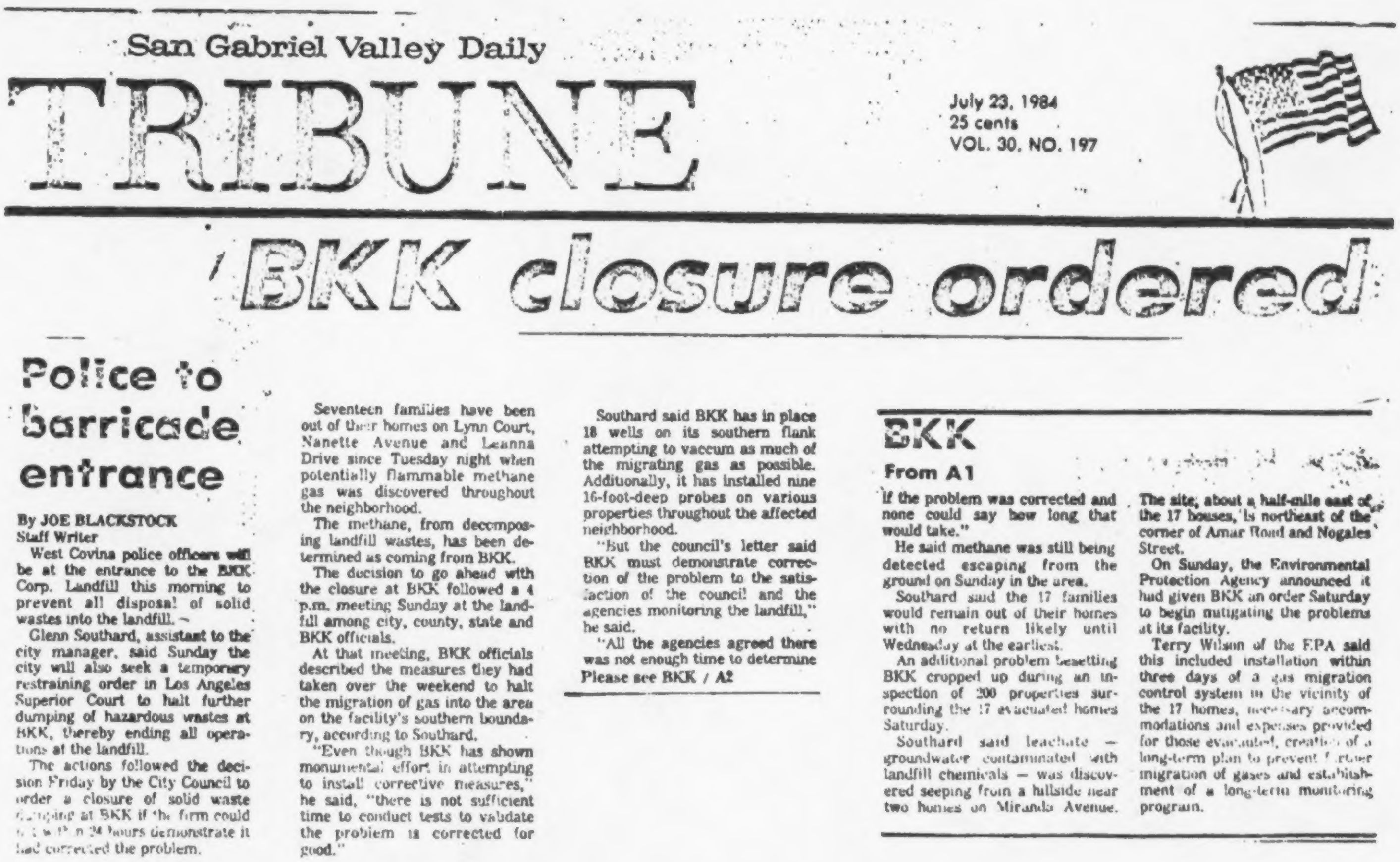
Photo / Tom Hinkle

Temporary closure

West Covina police officers Donald Fernald, by truck, and Dennis Mascilar remove signs and barricades from in front of the BKK Corp. Landfill on Monday. The landfill was closed to solid waste dumping by order of the City Council because of the migration of methane gas from the facility. However, a temporary restraining order obtained by BKK on Monday morning reopened the landfill.



San Gabriel Valley Daily
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BKK closure ordered

Police to barricade entrance

By JOE BLACKSTOCK
Staff Writer

West Covina police officers will be at the entrance to the BKK Corp. Landfill this morning to prevent all disposal of solid wastes into the landfill.

Glenn Southard, assistant to the city manager, said Sunday the city will also seek a temporary restraining order in Los Angeles Superior Court to halt further dumping of hazardous wastes at BKK, thereby ending all operations at the landfill.

The actions followed the decision Friday by the City Council to order a closure of solid waste dumping at BKK if the firm could not within 24 hours demonstrate it had corrected the problem.

Seventeen families have been out of their homes on Lynn Court, Nanette Avenue and Leanna Drive since Tuesday night when potentially flammable methane gas was discovered throughout the neighborhood.

The methane, from decomposing landfill wastes, has been determined as coming from BKK.

The decision to go ahead with the closure at BKK followed a 4 p.m. meeting Sunday at the landfill among city, county, state and BKK officials.

At that meeting, BKK officials described the measures they had taken over the weekend to halt the migration of gas into the area on the facility's southern boundary, according to Southard.

"Even though BKK has shown monumental effort in attempting to install corrective measures," he said, "there is not sufficient time to conduct tests to validate the problem is corrected for good."

Southard said BKK has in place 18 wells on its southern flank attempting to vaccum as much of the migrating gas as possible. Additionally, it has installed nine 16-foot-deep probes on various properties throughout the affected neighborhood.

"But the council's letter said BKK must demonstrate correction of the problem to the satisfaction of the council and the agencies monitoring the landfill," he said.

"All the agencies agreed there was not enough time to determine

Please see BKK / A2

BKK

From A1

if the problem was corrected and none could say how long that would take."

He said methane was still being detected escaping from the ground on Sunday in the area.

Southard said the 17 families would remain out of their homes with no return likely until Wednesday at the earliest.

An additional problem besetting BKK cropped up during an inspection of 200 properties surrounding the 17 evacuated homes Saturday.

Southard said leachate — groundwater contaminated with landfill chemicals — was discovered seeping from a hillside near two homes on Miranda Avenue.

The site, about a half-mile east of the 17 houses, is northeast of the corner of Amar Road and Nogales Street.

On Sunday, the Environmental Protection Agency announced it had given BKK an order Saturday to begin mitigating the problems at its facility.

Terry Wilson of the EPA said this included installation within three days of a gas migration control system in the vicinity of the 17 homes, necessary accommodations and expenses provided for those evacuated, creation of a long-term plan to prevent further migration of gases and establishment of a long-term monitoring program.

Los Angeles Times

★ Sunday, July 22, 1984/Part II 7

BKK Landfill Ordered Closed by West Covina

By MIKE WARD,
Times Staff Writer

The West Covina City Council Friday night ordered temporary closure of the BKK landfill because of leaking methane and vinyl chloride gases that are keeping 60 residents out of their homes.

The action could have a major impact on waste disposal regionally since BKK receives 6,000 to 8,000 tons of household trash a day and is Southern California's principal disposal site for hazardous waste.

The council decision, which the city expects BKK Corp. to challenge in court, will close the landfill to most kinds of waste within 24 hours, City Atty. Colin Lennard said. But, Lennard added, West Covina cannot stop the disposal of hazardous waste without a court order, which will be sought Monday.

Lennard said the city will try to keep the landfill closed until migration of gas off the site is stopped.

Refused to Act

The city acted after the federal Environmental Protection Agency and state Department of Health Services refused to close the landfill themselves. Judith Ayres, regional EPA administrator, said there are proven means to collect and destroy the landfill gas and "no need for closure has yet been demonstrated."

BKK is installing wells to collect and burn gas at the edge of its property, where it adjoins the 17 evacuated homes. These homes and 150 others will be inspected by an EPA emergency response team to find out how far the gas has spread and to analyze the contents. Vinyl chloride, a carcinogen, has been found in some of the gas.

Meanwhile, state health officials have told the evacuated residents they cannot return to their homes until Wednesday, at the earliest. The city is providing residents with motel rooms and paying for their meals. BKK Corp. will be billed for the expense.

The Valley

SATURDAY, JULY 21, 1984 SAN GABRIEL VALLEY TRIBUNE B1

Photo / Tom Hinkle

Concerned politician

[illegible] Torres, D-West Covina, discusses the high concentrations of methane gas in a neighborhood bordering the BKK Corp. Landfill with local residents. Of 19 homes evacuated only two have been reoccupied.

Official says city free to halt BKK

By JOE BLACKSTOCK
Staff Writer

West Covina can halt dumping of garbage and other solid wastes at the BKK Corp. Landfill as a solution to stopping migrating methane gases in the future, a state official said Friday.

While such an act would have little effect on the emergency situation in a West Covina neighborhood, Angelo Bellomo of the state Department of Health Services said it would "not be an unreasonable way to force BKK to comply with the law" to make the landfill secure in the future.

"If the city and other agencies which have the authority over solid waste at the landfill believe it the way to stop the migration of gas beyond the landfill, they are free to do just that," said Bellomo.

He gave the opinion in the wake of the Tuesday evacuation of 19 families from three streets adjacent to BKK after methane gas was discovered in potentially explosive quantities in the area.

Only two of the 19 houses have been reoccupied. State officials said the remaining families probably will not return to their homes until next week.

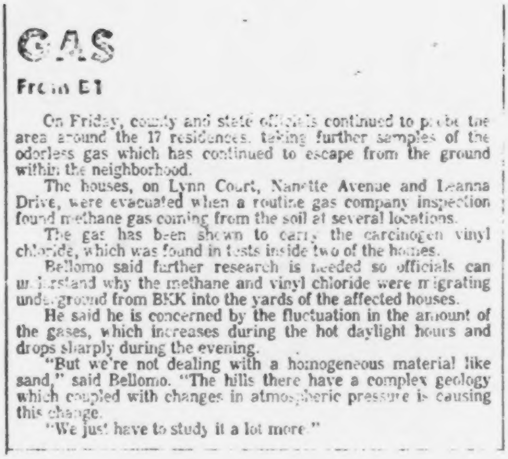
Bellomo emphasized the city would continue to have no control over dumping of hazardous wastes at the landfill.

Meanwhile, Al Zemsky of the Environmental Protection Agency said an order was being drafted by EPA and the health department to force BKK to install monitoring devices around the landfill and expand the present gas collection systems.

BKK officials tried to meet with the displaced residents Friday to offer assistance in "addressing logistical or expense problems" caused by the evacuation.

BKK spokesman Lynn Wessell said Friday an assistance phone number — (213) 668-0862 — would be manned today and Sunday during the day to answer residents' calls.

Please see GAS / B2



GAS

From E1

On Friday, county and state officials continued to probe the area around the 17 residences, taking further samples of the odorless gas which has continued to escape from the ground within the neighborhood.

The houses, on Lynn Court, Nanette Avenue and Leanna Drive, were evacuated when a routine gas company inspection found methane gas coming from the soil at several locations.

The gas has been shown to carry the carcinogen vinyl chloride, which was found in tests inside two of the homes.

Bellomo said further research is needed so officials can understand why the methane and vinyl chloride were migrating underground from BKK into the yards of the affected houses.

He said he is concerned by the fluctuation in the amount of the gases, which increases during the hot daylight hours and drops sharply during the evening.

"But we're not dealing with a homogeneous material like sand," said Bellomo. "The hills there have a complex geology which coupled with changes in atmospheric pressure is causing this change.

"We just have to study it a lot more."

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BKK shutdown voted

By MARK ADAMS
Staff Writer

The West Covina City Council voted Friday to close the BKK Corp. Landfill to non-hazardous waste and seek an immediate court order prohibiting receipt of hazardous materials.

The action follows the discovery this week of high concentrations of methane and other gases in a residential neighborhood bordering the controversial landfill.

The ban will remain in effect until BKK can demonstrate the problem is solved and installs a system to fully monitor the migration of landfill gases, the motion stated.

City Attorney Colin Lennard told council members they had authority to take the action by declaring BKK a public nuisance and suspending its unclassified use permit.

A resolution making the nuisance determination was passed 4-0, with Councilman Ken Chappell absent.

The council approved the related order directing BKK to correct the migration of gases within 24 hours after notification that it has violated the unclassified use permit, due to the presence of the gas outside landfill boundaries.

Notification will be made today.

Council members said they saw no possibility that the source of the gas can be pinpointed and rectified this weekend and expect the ban will be enacted Sunday.

Related story on B1

Council members authorized City Attorney Colin Lennard to take all necessary legal steps to enforce the action.

Lennard said he would seek a restraining order prohibiting the dumping of hazardous wastes on Monday.

That restriction cannot come from the city administrative level, he said.

He also will immediately send letters to the federal Environmental Protection Agency, the state Department of Health Servcices and the Air Quality Management District demanding that they use their powers to immediately close the landfill until it is demonstrated gas is no longer migrating beyond BKK borders.

"If such action is not taken, the city will hold them responsible for any resulting damages," Lennard said, stating that West Covina will take the agencies to court Monday if they refuse to close BKK.

Lennard said that if landfill management does not feel the city's action is justified, they have legal options open to them, but the ban will remain in effect until the requirements of the motion are met.

Glenn Southard, assistant to the city manager, was asked what action West Covina might take if BKK ignores the city and continues to accept non-hazardous waste.

"The city will not allow waste to be accepted at the landfill," he said.

Council members said clear health hazards presented by the concentrations of methane, vinyl chloride and other gases in the neighborhood and the refusal of regulatory agencies to close the

Please see BKK / A2

BKK

From A1

landfill prompted the city's action.

Councilman Chester Shearer said he had asked the Department of Health Services if the current condition presented an unacceptable risk to residents and was told that it did.

When he asked why the agency would not then close BKK, he said he was told there was no evidence shutting down the landfill would reduce the risk to health.

Shearer then asked if the department could guarantee that continued operation would not increase the risk of further migration, and said he was told that that particular guarantee could not be made.

"I think we have tolerated this, been long-suffering and bent over backward long enough," Shearer said in making the motion.

BKK has begun to drill gas recovery wells in the problem area, designed to halt the gas migration. Further testing at the site is being completed, with the area being studied expanded to include an additional 125 homes.

West Covina is paying motel and food bills for 17 families that were evacuated from their homes Tuesday, although many have opted to stay with friends or relatives. Other out-of-pocket expenses are also being taken care of and family movie passes have been provided by a local theater chain.

Walter Mondale
... 'It wasn't easy'

It took 1,967 to win the nomination. Mondale, embodiment of the Democratic establishment, got 2,191, Hart 1,200.5 and Jackson 465.5.

Please see MONDALE / A2

A San Diego police officer helps an injured woman away from the scene of a shooting Wednesday at a McDonald's restaurant in San Ysidro. The woman was in the restaurant when a gunman opened fire, killing 20 before he was slain by a police sharpshooter.

Some return after BKK evacuation

By JOE BLACKSTOCK
Staff Writer

Two of the 19 West Covina families forced to evacuate from an accumulation of methane gas in their neighborhood were allowed to return to their homes Wednesday.

City emergency personnel said the Lynn Court families were allowed back into their homes, but health officials said they were unsure when all residents of the homes along the southern slope of BKK Corp. Landfill would be allowed to return after being evacuated Tuesday night.

The gas was tentatively identified Wednesday night as originating from the landfill, according to Glenn Southard, assistant city manager of West Covina.

Further study is being conducted to determine its concentration, components and why it is present in the neighborhood, he said.

Gas readings were taken inside five of the 19 affected houses Wednesday afternoon while checks of air and soil were conducted outside the other 14 properties.

Technicians at the South Coast Air Quality Management District were doing the analysis of the samples.

Gas samples taken at ground level outside of the houses during the day Tuesday had methane concentrations of up to 98 percent, but those levels dropped to virtually zero by midnight, said Denise King, a spokeswoman for Southern California Gas Co.

The levels of the flammable gas rose again to as high as 85 percent Wednesday morning.

"All we really know is that it is combustible gas, and we can't make a determination of when the residents can return until we know the constituents of that gas," said Angelo Bellomo, director of the hazardous waste division of the Southern California office of the state Department of Health Services.

Bellomo said the problem, first discovered in a routine check of gas company pipelines on July 9, may have existed for some time.

Health department officials are looking over results of air samples taken in the area recently to determine if this has been a long-term condition.

Please see EVACUATION / A2

Rich Terrell of the gas company said the problem gas apparently has no odor. Several residents of the area said they had not noticed any unusual odors prior to the evacuation.

City and gas company officials said earlier the gas is only slightly different from natural gas, and is one of several types of methane gas often formed from decomposing wastes in landfills.

The residents were ordered out of their houses about 8:30 p.m. Tuesday as a precautionary measure following disclosure of the problem.

Gas company workers had detected the gas in sample taken more than a week ago.

Residents spend night away from home

Sylvia Cordero sat in front of her house Wednesday afternoon patiently waiting to get past the front door.

In her way was a massive group of humanity — officials and technicians from a half-dozen city, county and state agencies cautiously peering into her house.

Miss Cordero, 16, was among the 60 residents of Lynn Court, Nanette Avenue and Leanna Drive who were unable to spend Tuesday night in their homes because of an evacuation due to unexplained emissions of methane gas.

"I need to get in there," she said as she looked at the group on the doorstep of her house at the end of the cul de sac of Lynn Court.

"I have to be at work in a while, and I can't go dressed in blue jeans."

Miss Cordero had returned from work at Puente Hills Mall on Tuesday night to find the area had been evacuated by West Covina police officers. She and her family spent the evening with an aunt around the corner.

Later, after the officials probed and sampled the air and soil around the house Wednesday, she was allowed to quickly go into the residence, get needed clothes and empty the refrigerator. The electricity had been turned off as a precaution in all of the homes.

In all, residents of 19 homes were forced to leave Tuesday night. All were offered accommodations at two area motels, but only four persons used those facilities, according to Gus Salazar, West Covina's human resources director.

The remainder found lodging with friends relatives.

Faris Manning, whose house on Nanette Avenue had the highest levels of methane found since Tuesday, said he and his wife, Ada, spent the night at her mother's house.

He was philosophical after opening the door of his house to allow the government experts to probe the air inside.

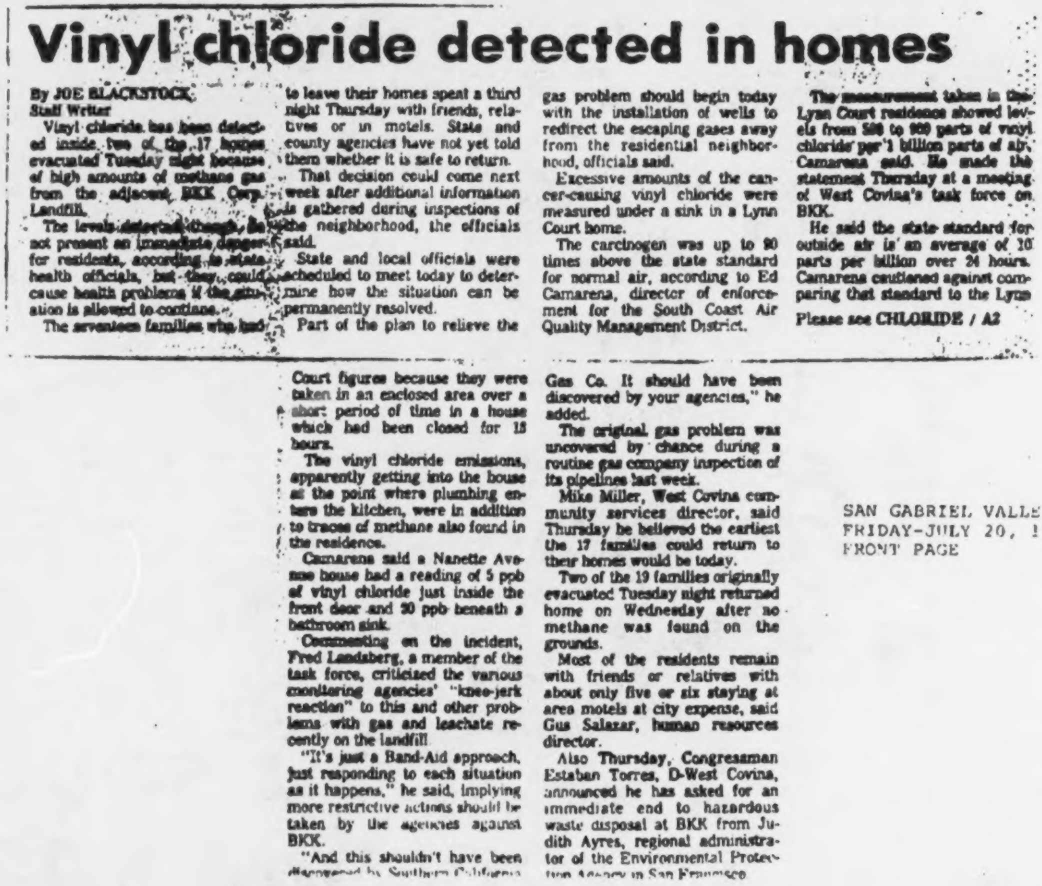
"It's always a shock when you have to move out of your house like this," he said.

For Miss Cordero, the move had its light moments. When her mother evacuated, she forgot two dogs and a cat in the house.

"They let me in to get the dogs about 11 o'clock, and one of them started running all over the neighborhood," she said. "I also had to chase my cat halfway up the slope (toward the fence separating the property from BKK Corp. Landfill) before I caught it."

— JOE BLACKSTOCK

SAN GABRIEL VALLEY TRIBUNE - THURSDAY - JULY 19, 1984 - FRONT PAGE



Vinyl chloride detected in homes

By JOE BLACKSTOCK
Staff Writer

Vinyl chloride has been detected inside two of the 17 homes evacuated Tuesday night because of high amounts of methane gas from the adjacent BKK Corp. Landfill.

The levels detected, though, do not present an immediate danger for residents, according to state health officials, but they could cause health problems if the situation is allowed to continue.

The seventeen families who had to leave their homes spent a third night Thursday with friends, relatives or in motels. State and county agencies have not yet told them whether it is safe to return.

That decision could come next week after additional information is gathered during inspections of the neighborhood, the officials said.

State and local officials were scheduled to meet today to determine how the situation can be permanently resolved.

Part of the plan to relieve the gas problem should begin today with the installation of wells to redirect the escaping gases away from the residential neighborhood, officials said.

Excessive amounts of the cancer-causing vinyl chloride were measured under a sink in a Lynn Court home.

The carcinogen was up to 90 times above the state standard for normal air, according to Ed Camarena, director of enforcement for the South Coast Air Quality Management District.

The measurement taken in the Lynn Court residence showed levels from 500 to 900 parts of vinyl chloride per 1 billion parts of air, Camarena said. He made the statement Thursday at a meeting of West Covina's task force on BKK.

He said the state standard for outside air is an average of 10 parts per billion over 24 hours. Camarena cautioned against comparing that standard to the Lynn

Please see CHLORIDE / A2

Court figures because they were taken in an enclosed area over a short period of time in a house which had been closed for 18 hours.

The vinyl chloride emissions, apparently getting into the house at the point where plumbing enters the kitchen, were in addition to traces of methane also found in the residence.

Camarena said a Nanette Avenue house had a reading of 5 ppb of vinyl chloride just inside the front door and 30 ppb beneath a bathroom sink.

Commenting on the incident, Fred Landsberg, a member of the task force, criticized the various monitoring agencies' "knee-jerk reaction" to this and other problems with gas and leachate recently on the landfill.

"It's just a Band-Aid approach, just responding to each situation as it happens," he said, implying more restrictive actions should be taken by the agencies against BKK.

"And this shouldn't have been discovered by Southern California Gas Co. It should have been discovered by your agencies," he added.

The original gas problem was uncovered by chance during a routine gas company inspection of its pipelines last week.

Mike Miller, West Covina community services director, said Thursday he believed the earliest the 17 families could return to their homes would be today.

Two of the 19 families originally evacuated Tuesday night returned home on Wednesday after no methane was found on the grounds.

Most of the residents remain with friends or relatives with about only five or six staying at area motels at city expense, said Gus Salazar, human resources director.

Also Thursday, Congressman Estaban Torres, D-West Covina, announced he has asked for an immediate end to hazardous waste disposal at BKK from Judith Ayres, regional administrator of the Environmental Protection Agency in San Francisco.

SAN GABRIEL VALLEY TRIBUNE
FRIDAY-JULY 20, 1984
FRONT PAGE

Gas leak evacuates 19 homes near BKK

By JOE BLACKSTOCK
Staff Writer

Nineteen homes on the southern slope of the BKK Corp. Landfill in West Covina were evacuated Tuesday night due to high concentrations of flammable methane gas found in that neighborhood.

Beginning at 8:40 p.m., residents of 19 homes on Lynn Court, Nanette Avenue and Leanna Drive were taken by West Covina emergency personnel to a temporary shelter set up at Shadow Oak Park.

Later, they were to be housed at three motels in the vicinity.

The gas, flammable and explosive at certain concentrations, was discovered around the homes during a routine Southern California Gas Co. inspection late in the afternoon.

After a check of their own pipelines in the area, gas company personnel informed the city the gas was from another source.

City, BKK and gas company officials were unable to give an explanation for the source of the methane, although the southern slope of the landfill is just above the Lynn Court and some of the Nanette Drive homes.

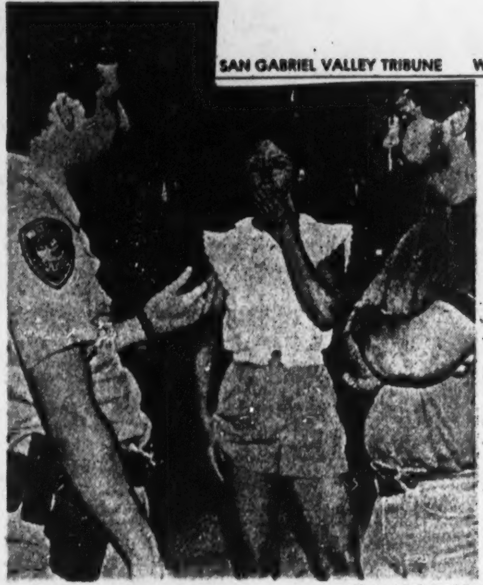
BKK Corp. has had problems with escaping methane gases in the past, but has constructed an extensive gas collection system throughout its facility to trap the hydrocarbon.

Methane, similar to natural gas, is principally produced by decaying trash and vegetable matter buried underground in landfills.

At one home, 2041 Nanette, gas company personnel detected concentrations of methane at nearly 100 percent in some pockets around the foundations. That later fell to only 10 percent and then jumped again to 50 percent.

Glenn Southard, assistant to the city manager, said methane can be highly flammable in moderate

Please see EVACUATED / A2



SAN GABRIEL VALLEY TRIBUNE WEDNESDAY, JULY 18, 1984

Photo / Bob Buriche

Time to get out

Joseph and Chong Jaime listen to West Covina Officer Jim Short as he explains they will have to evacuate their Nanette Avenue home Tuesday evening. High concentrations of flammable methane gas were discovered in the neighborhood on three streets along the southern boundary of the BKK Corp. Landfill, requiring the evacuation of 19 homes. The evacuated residents were put up in

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EVACUATED

From A1

concentrations in closed areas, such as garages or inside homes.

Gas company and BKK personnel spent several hours assessing the volume of gas in the neighborhood before a decision was made by emergency personnel about 8:30 to move out the people.

In the meantime, residents remained in their homes until the evacuation order was given.

The homes evacuated by city emergency crews were 2401, 2405 and 2409 Leanna Drive; 2023, 2029, 2035, 2041, 2032, 2118 and 2044 Nanette Avenue; and 2313, 2307, 2322, 2328, 2334, 2336, 2342, 2346, 2352 Lynn Court.

The gas company shut off all gas meters at the homes and residents were given the option of turning off electricity.

One resident, Ada Manning, who said she will stay with her father overnight, shrugged off the danger of the methane as she was evacuated, saying she was more concerned with the possible spoilage of the meat in her refrigerator.

There was no word as to how long residents would have to stay out of their homes.

Persons wishing information on the evacuation can call one of three public information numbers: 962-8647, 962-8648 or 962-8649.